United States Patent

[11] **3,550,857**

[72] Inventor **Roland G. Ahlberg**
15A Dryer Ave., Everett, Mass. 02149

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[54] **DIRECTIONAL CAP FOR SPRAY DISPENSERS**
1 Claim, 4 Drawing Figs.

[52] **U.S. Cl.** **239/288,** 132/9
[51] **Int. Cl.** **B05b 1/28**
[50] **Field of Search** ..... 222/402.1, 182, 570, 571, 394, 108, 401.2; 239/288, 288.3, 288.5, 103, (Inquired); 132/1, 7, 9, 88.5, 88.7

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Primary Examiner—Stanley H. Tollberg
Attorney—Morse, Altman & Oates

ABSTRACT: A cap is provided for use on spray dispensers such as aerosol cans and particularly for use on cosmetic spray dispensers. The cap is used in place of the conventional cover and is formed with a contoured, semiconical guide or funnel the apex of which registers with the nozzle on the dispenser and the outer end of which is configured to conform to the shape of the head and serves to direct the spray to the hair and keep it away from the face. A sponge mat is mounted over the inside lower wall of the funnel near the outer end thereof to collect and absorb condensed spray.

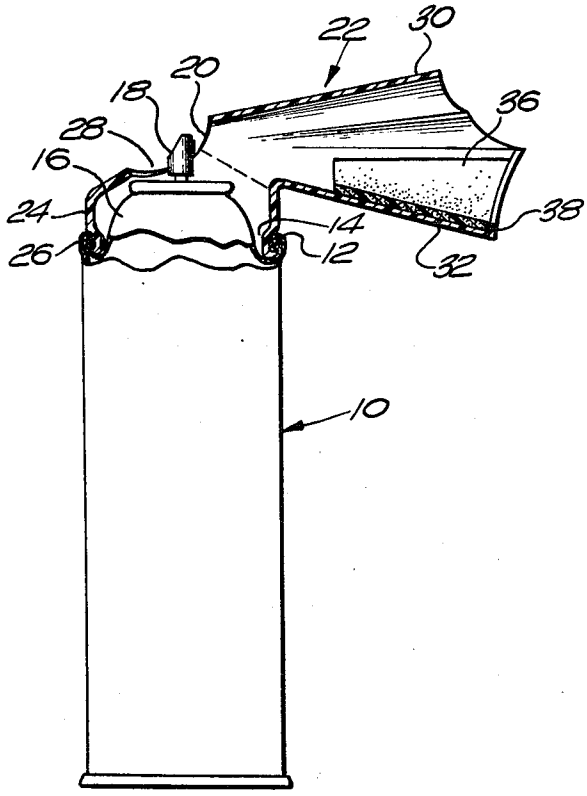
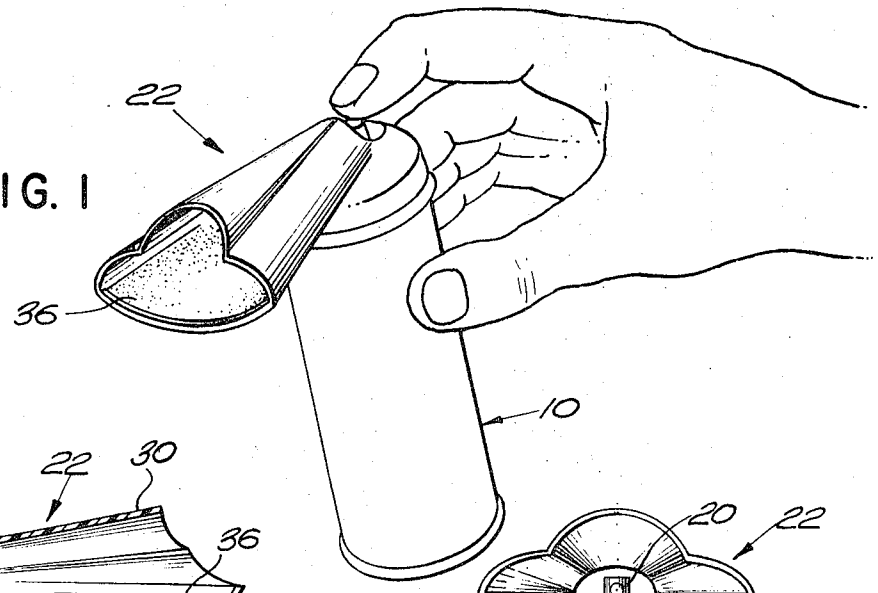


FIG. 1



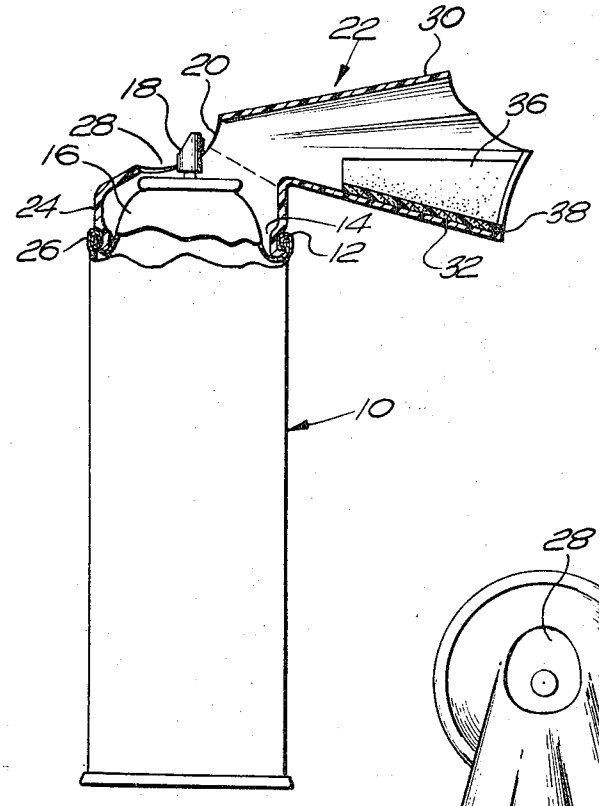


FIG. 2

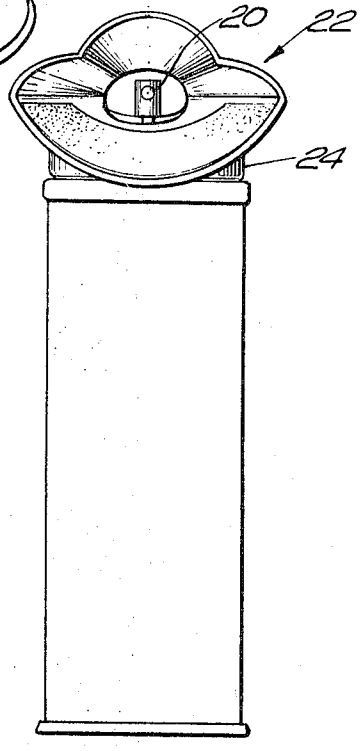


FIG. 3

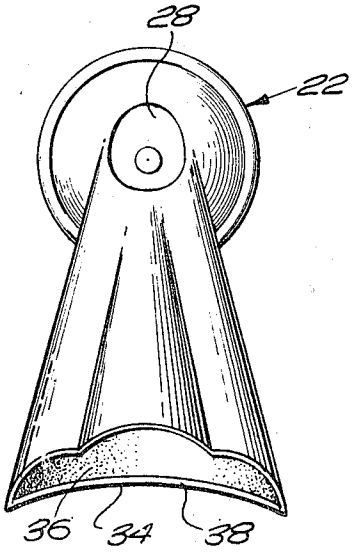


FIG. 4

INVENTOR
ROLAND G. AHLBERG
BY
Morse, Altman & Oates
ATTORNEYS

DIRECTIONAL CAP FOR SPRAY DISPENSERS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to attachments for spray dispensers and more particularly is directed towards a new and improved directional spray cap for use with aerosol dispensers and the like, particularly cosmetic hair spray dispensers.

2. Description of the Prior Art

Spray dispensers, such as aerosol dispensers for cosmetic hair sprays, are provided each with small nozzle which, when depressed, releases the spray to one side of the dispenser in the form of a mist. Generally, the discharge is not particularly controlled as to shape and direction, the spray tending to spread outwardly with the result that the spray often gets on the face or clothes of the user. Care must be taken also to prevent any condensed spray from dripping onto the person's clothes which may be permanently stained, also, if toxic, to keep the spray out of the person's eyes. Thus, despite considerable caution taken by the user the conventional spray dispenser is unsatisfactory and involves a considerable amount of waste.

While various types of directional nozzles have been heretofore available, they have not been satisfactory for use particularly with cosmetic hair sprays from the standpoint of spray control effectiveness and in maintaining the spray within the desired area. Accordingly, it is an object of the present invention to provide a directional spray cap for use with aerosol dispensers, and the like, adapted for use particularly with cosmetic hair sprays and capable of preventing spray from discharging elsewhere than the hair and also adapted to collect condensed spray.

SUMMARY OF THE INVENTION

This invention features an attachment for aerosol spray dispensers, particularly cosmetic hair spray dispensers, comprising a cap adapted to fit over the head of the dispenser in place of the usual cover, the cap being formed with a somewhat conical guide or funnel extending to one side thereof and in register with the nozzle of the dispenser. The cap is provided with an opening for access to the nozzle and the outer end of the funnel is curved to conform to the shape of the head with the lower portion extending forwardly of the upper portion to provide a better flow path for the spray and also to catch a condensed spray on the upper edge of the funnel. An absorption mat, such as a sponge, is mounted along the lower wall of the guide to catch and absorb the condensed spray.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view in perspective of a directional cap made according to the invention and mounted to a spray can,

FIG. 2 is a view in side elevation, partly in section, of a spray cap mounted in position,

FIG. 3 is a view in front elevation thereof, and

FIG. 4 is a top plan view thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings the reference character **10** generally indicates an aerosol spray dispenser which, in addition to other applications, is frequently employed with cosmetic hair sprays. The dispenser **10** typically is cylindrical in shape and is formed with an annular lip **12** about its upper edge surrounding an annular groove **14** employed to seat in snapping engagement a cooperating cover, also of cylindrical shape. The dispenser **10** is also provided with a domed head portion **16** on the top of which is mounted a nozzle valve **18** formed with a discharge opening **20** on one side thereof. The dispenser is actuated usually by first shaking the dispenser so as to build up the pressure of the gas propellant and then the valve nozzle **18** is depressed manually. This will open the valve and a fine mist will be discharged from the opening **20**.

Mounted in place of the conventional cover is a directional spray cap generally indicated by reference character **22**. The cap **22** is formed with a cylindrical base portion **24** having an annular lip **26** adapted to connect in snapping engagement with the lip **12** of the dispenser **10**, the lip **26** seating in the annular groove **14**. The cap **22** spans the domed portion **16** of the dispenser and is provided with an upper rear opening **28** which provides access to the nozzle valve **18** so that the person holding the can in one hand may actuate the valve by inserting a finger through the opening.

Extending out to one side of the cap **22** is a hollow guide or funnel portion **30**, somewhat cone-shaped, and aligned with the opening **20** in the valve **18**. The guide **30** preferably is scalloped in cross section to provide a stiff construction and preferably extends outwardly form the base portion of the cap by a distance of perhaps 6 inches or so. The lower wall of the guide **30**, indicated by reference character **32**, extends further than the upper wall and terminates in a concave edge **34** best shown in FIG. **4**. The curved edge **34** generally conforms to the shape of the human head so that the discharge end of the cap may be placed against the hairline of the forehead, for example, and spray discharged onto the hair without the spray going onto the face of the user.

The discharge end of the funnel terminates in an edge which is generally diagonal to the funnel axis with the edge of the upper wall being located rearwardly of the lower edge **34** as best shown in FIG. **4**. Thus with the cap held so that the edge **34** is close to or against the head of the user and in generally perpendicular relation thereto, clearance is provided above the lower wall by reason of the diagonal discharge end of the funnel to provide a flow path for the spray from the dispenser **10**. The discharge will be guided by the funnel and will be directed to a selected localized area, the lower wall serving to prevent the mist from bothering the user while the inclined opening permits control over the flow into the hair. The rear opening **28**, which provides access to the valve **18** also serves as a vent for the funnel to further improve the discharge from the dispenser.

Mounted along the upper face of the lower wall **32** and along the outer margin thereof is a stratum **36** of sponge, or the like, which serves to collect and retain any condensed spray, particularly condensation which may collect on the outer edge of the upper wall of the funnel and drip down. A lip **38** is formed along the curved outer edge of the lower wall and serves as a barrier to retain any excess condensation which may collect on the sponge. Condensation of the spray becomes particularly bothersome after the first few seconds of discharge.

The device may be used by removing the original cover and placing the cap in position as shown. The funnel is aligned with the nozzle discharge opening **20** and is placed close to or against the head so that the eyes and other portions of the face are shielded when the spray is released. The funnel thus keeps the spray within the desired area so that there is no waste and the hair is covered more efficiently and fully than would otherwise be the case. The forwardly extending lower wall and the sponge liner serve to prevent condensation from dripping onto the user's face or clothes thereby eliminating any risk of injury due to toxic sprays or staining of clothes.

While the invention has been described with particular reference to the illustrated embodiment, it will be understood that numerous modifications thereto will appear to those skilled in the art. Accordingly, the above description and accompanying drawings should be taken as illustrative of the invention and not in a limiting sense.

I claim:

1. A directional cap for a cylindrical spray dispenser or the like having a nozzle, comprising:

a. a unitary tubular cylindrical body portion open at one end and formed with an annular portion about said one end and adapted to be mounted to said dispenser and over said nozzle;

b. the other end of said body portion being substantially closed and formed with a restricted opening adjacent to

said nozzle and of a size to allow manual access to only said nozzle for operation thereof;

c. an integral outwardly diverging funnel portion of scalloped cross section substantially perpendicular to the length of said dispenser extending for a substantial distance outwardly from said body portion in line with said restricted opening and projecting beyond the sides of said dispenser when mounted thereon in register with said nozzle;

d. the discharge end of said funnel terminating in a plane diagonal to the axis of the funnel whereby the lower portion of said funnel extends further than the upper portion thereof when said cap is mounted in an upright position; and,

e. an absorbent stratum disposed on the inner surface of said lower portion adjacent the outer edge thereof.