

[54] COVER FOR AEROSOL INHALATING DEVICE

3,429,310 2/1969 Jaffe et al. 222/182 X

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[57] ABSTRACT

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[58] Field of Search 220/31 S; 239/337, 338; 222/162, 173, 179.5, 182, 183, 344, 543, 562; 128/173, 208, 211

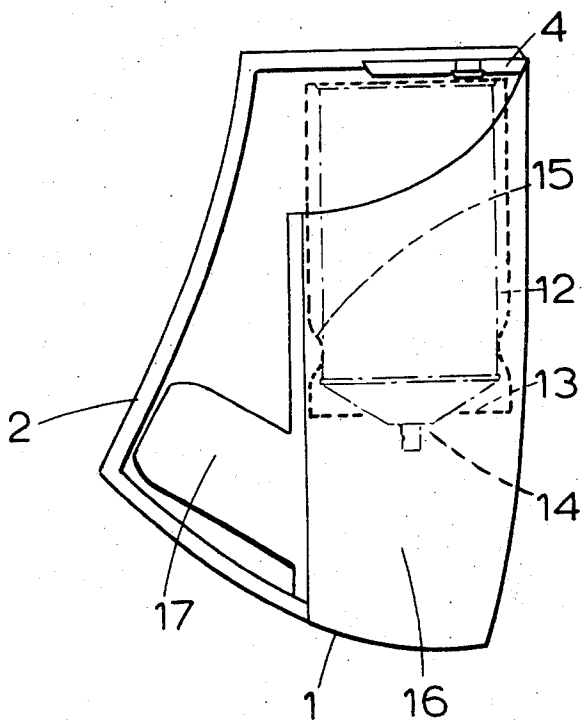
An aerosol applicator has a body which is open at one end. The body is arranged to receive and retain an aerosol container. An applicator spout for a mixture of medicament from the aerosol container and air leads out of the body. The body has a cover which is hingedly connected to the body. The cover has a portion which, when the cover is closed, closes the open end of the body and a second portion which closes the spout.

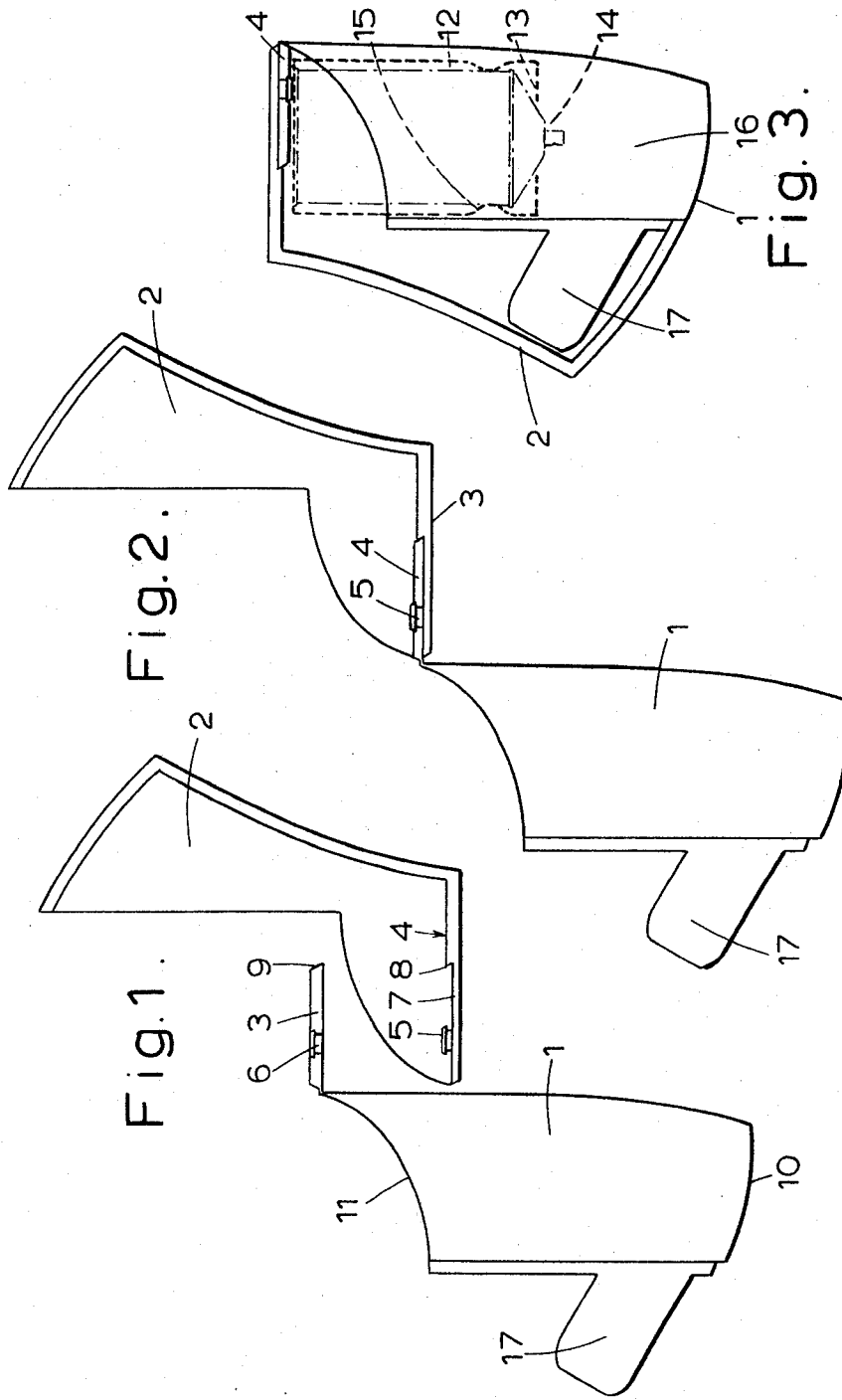
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3 Claims, 3 Drawing Figures





COVER FOR AEROSOL INHALATING DEVICE

BACKGROUND OF THE INVENTION

Aerosols are commonly used, for example, in the treatment of conditions of the nose, throat or mouth. The aerosols are applied to the affected parts by means of nasal or oral applicators or dispensers which usually comprise a body in which a removable aerosol container is arranged. The body has an outlet applicator spout which is usually closed by a removable cover and an air inlet so that the medicament is scavenged by the air entering the applicator, the mixture then being discharged from the applicator spout. Such applicators are intended to be carried in a pocket or a handbag of the user. The removable covers frequently become lost and the applicator spouts and air inlet passages become contaminated by the kind of material commonly found in a handbag or pocket so that the efficacy of the treatment is frequently reduced.

It is an object of this invention to provide an aerosol applicator which does not suffer from these disadvantages.

BRIEF SUMMARY OF THE INVENTION

The invention provides an aerosol applicator comprising a body which is open at one end and is arranged to receive and retain an aerosol container, an applicator outlet spout for a mixture of medicament and air leading out of a side of the body and a cover hingedly connected to the body, the said cover having a portion which, when the cover is closed, closes the open end of the body and a second portion which encloses the outlet spout.

BRIEF DESCRIPTION OF THE ACCOMPANYING DRAWINGS

FIG. 1 is a sectional elevation of two component parts of an applicator according to the invention.

FIG. 2 illustrates the assembled applicator in an open position, and

FIG. 3 illustrates the applicator in a closed position.

DESCRIPTION OF A PREFERRED EMBODIMENT

An applicator for nasal aerosols comprises a body 1 and a cover or lid 2 which are connected together by a hinge. The body, cover and hinge are conveniently injection-moulded as two separate parts from a suitable plastics material, preferably polypropylene. The hinge is preferably of the kind commonly known in the plastics industry as a "living" hinge, and constituted by two thin flexible membranes 3, 4 of the plastics material. The two membranes form part of the mouldings of the respective component.

The membrane 4 has an integral stud 5 which is a snap fit in a complementary aperture 6 in the membrane 3. The membrane 4 of the cover has a portion 7 of reducing thickness. The portion 7 has a sloping abutment 8 with which a sloping edge 9 of the membrane 3 engages when the body and the cover are assembled.

The body 1 is of generally cylindrical tubular shape and is closed at one end 10 of the chamber and open at the other end 11. For the convenience of description, the open end of the body will hereinafter be considered to be the top end. The open top 11 of the body leads into a chamber 12 in body, in which an aerosol container (shown in broken lines) for a medicament can be inserted. Chamber 12 terminates in an end wall

13 having a passage 14 through which the outlet from the aerosol container can pass and a rib 15 or other suitable fitting with which a complementary fitting on the aerosol container can be engaged in order removably to retain the container in the chamber. The relative dimensions of the aerosol container and the chamber are such that an air inlet space is provided between the outer wall of the container and the inner wall of the chamber and an end of the container projects slightly above the open top of the chamber. Movement of the aerosol container towards the end wall of the chamber will open an aerosol valve of the container in the conventional manner so that aerosol can pass from the aerosol into the outlet compartment 16 beneath the end wall of the chamber. Air can also pass from the air inlet space in the chamber into this compartment.

A spout-like applicator outlet 17 defining a second chamber leads from out of the tubular wall of the body. This applicator outlet 17 is inclined upwards. It will be appreciated that if the invention is applied to applicators other than nasal applicators, for example to oral applicators, the applicator outlet may have other shapes and dispositions.

The cover 2 is shaped so that when it is in the closed position it will not only close the open end of the tubular body, but will also enclose the spout-like applicator outlet 17. For this reason, the cover has a cross-section which is of approximately inverted L-shape. Thus, it has a top portion which is connected to the top of the body by the hinge membrane 4 which is located on the opposite side of the axis of the body to the spout-like applicator outlet 17. When the cover 2 is closed, this top portion lies across the top of the body (see FIG. 3). The top portion has a shallow wall or flange which encloses the projecting end of the aerosol container. When the cover is closed, the top portion seals the space between the walls of the aerosol container and the chamber against the ingress of dirt or other contaminant.

The cover also has a second or side portion which is shaped approximately as a segment of a cylinder, so that when the cover is closed it will enclose the spout-like applicator outlet to prevent the ingress of dirt or other contaminant.

When the cover is closed, it is a push-fit on the body of the applicator so that it will be held closed.

The applicator of the invention is of attractive appearance and is simple to open and close, even by children. The cover, when closed, will seal off both the air inlet space of the body and the outlet applicator spout against the kind of contamination usually produced by carrying such articles in a pocket or handbag. This is particularly important when the applicator is used for the application of medicament to be used in the treatment of such conditions as allergic rhinitis.

What is claimed is:

1. An aerosol medicament applicator comprising a hollow body open at the upper end thereof said hollow body having a chamber, said chamber having means to removably receive and retain an aerosol container, an applicator outlet spout leading out of a side of the body adjacent the lower end thereof and a cover member hingedly connected to the body at the upper end thereof, said cover having a first portion which, when the cover is closed, closes the open upper end of said hollow body and an integral second portion which encloses the outlet spout.

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2. An applicator as claimed in claim 1 further comprising, a second chamber which communicates with said first chamber through a passage in said first chamber, the outlet spout being defined by an opening in said second chamber remote from the passage.

3. An applicator as claimed in claim 2, wherein the cover and the body are of plastics material and the

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hinge comprises a pair of flexible membranes one of which is integral with the cover and the other of which is integral with the body, the two membranes being detachably secured together in face contact by engaging a stud on one membrane in an aperture in the other membrane.

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