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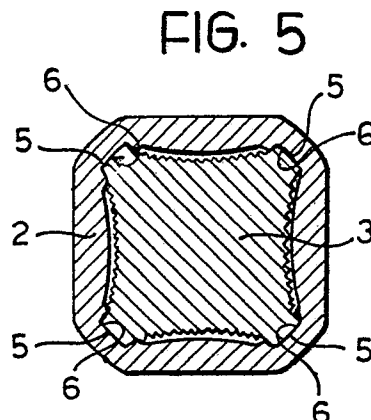
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The title of the invention has been amended (Guidelines for Examination in the EPO, A-III, 7.3).

(54) **Push-button device for a spray container.**

(57) A push-button for delivering a pumped spray of liquid product from a container (1) of the type in which the push-button (3) is provided with a nozzle (4) in its lateral surface for delivering the product and is guided by means of a prismatic coupling for sliding movement in a guide sleeve (2) fixed to the top of the container. The coupling surfaces between the push-button (3) and the guide sleeve (2) are constituted exclusively by axial ribs (5) of the push-button (3) and by corresponding grooves (6) within the sleeve (2).



Description

A push-button device for delivering a pumped spray of liquid product from a container

The present invention relates to a push-button device for delivering a pumped spray of liquid product from a container.

More particularly, the invention relates to a device of the said type in which the push-button is provided with a nozzle in its lateral surface for delivering the product and is guided by means of a prismatic coupling for sliding movement in a guide sleeve fixed to the top of the container.

This solution prevents the push-button from moving angularly in the guide sleeve and changing the direction of the jet of product delivered by the device.

According to the prior art, the prismatic coupling is achieved by giving the push-button a regular-polygonal shape which, particularly in the case of push-buttons which are short in relation to their width, encourages the push-button to jam during its axial sliding movement, particularly when the push-button and the guide sleeve are made of soft materials such as plastics.

In order to avoid the above problem, the present invention provides a push-button device of the type specified above, whose characteristic lies in the fact that the coupling surfaces between the push-button and the guide sleeve are constituted exclusively by axial ribs of the push-button and corresponding grooves within the sleeve.

By virtue of this characteristic the push-button is prevented from jamming even if the apparent ratio of its length to its width is very small since it is the ratio of the length to the width of the axial ribs of the push-button which affects the jamming.

Further characteristics and advantages of the present invention will become clear from the detailed description which follows with reference to the appended drawings, provided by way of non-limiting example, in which:

Figure 1 is a side elevation of a device according to the invention,

Figure 2 is a front view of the device,

Figure 3 is a rear view,

Figure 4 is a plan view, and

Figure 5 is a cross-section taken on the line V-V of Figure 1, on an enlarged scale.

A container is indicated 1 and, in the embodiment illustrated, is constituted by a canister, but could alternatively be another type of container, such as a scent bottle with a shape which is not radially symmetrical, for example a rectangular shape in plan.

A guide sleeve 2 is fixed in known manner to the top of the container 1 and a manually-operable, axially-slidable push-button 3 is slidable axially therein.

In known manner the operation of the push-button 3 causes the liquid in the container to be sprayed through a nozzle 4 in the lateral surface of the push-button due to the pumping effect.

As shown in particular in Figure 5, the push-button 3 is guided in the sleeve 2 by means of a

prismatic coupling the surfaces of which are constituted exclusively by axial ribs 5 of the push-button and by corresponding grooves 6 within the sleeve 2.

The portions of the lateral surface of the push-button 3 which are between the ribs are spaced from the facing surfaces of the sleeve 2 and are suitably decorated with fine grooves.

The top of the push-button 3 has an inclined surface 7 and a limited flat surface 8; the surface 7 has a depression 7a which constitutes a seat for the thumb of the hand operating the device.

The coupling of the ribs 5 with the grooves 6 prevents any jamming during the axial movement of the push-button even when there is a very small apparent ratio between its length and its width.

Claims

A push-button device for delivering a pumped spray of liquid product from a container, of the type in which the push-button is provided with a nozzle in its lateral surface for delivering the product and is guided by means of a prismatic coupling for sliding movement in a guide sleeve fixed to the top of the container, characterised in that the coupling surfaces between the push button (3) and the guide sleeve (2) are constituted exclusively by axial ribs (5) of the push-button and by corresponding grooves (6) within the sleeve (2).

FIG. 1

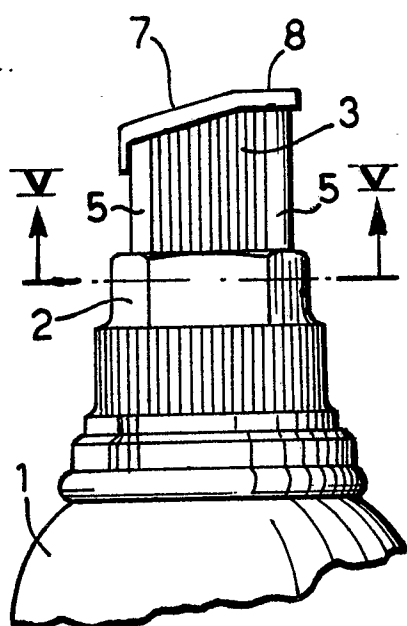


FIG. 2

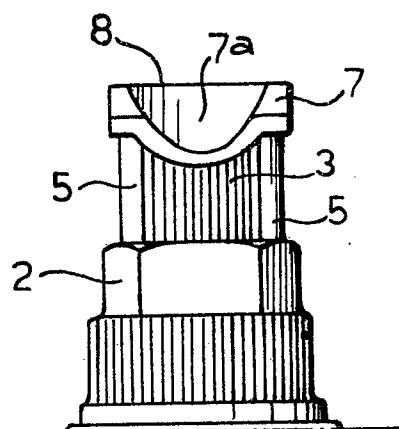


FIG. 3

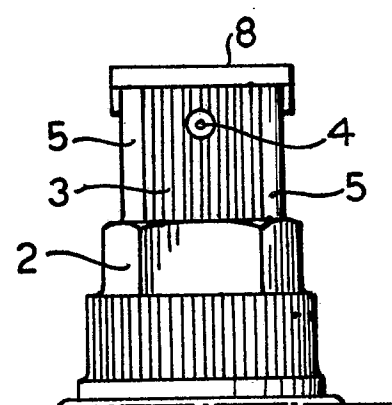


FIG. 4

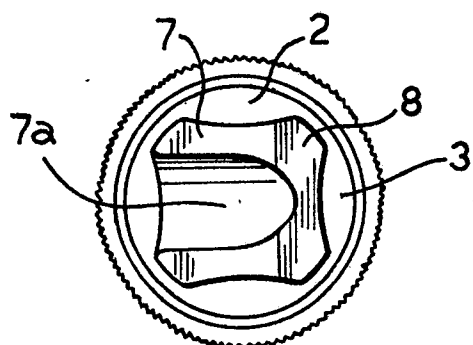
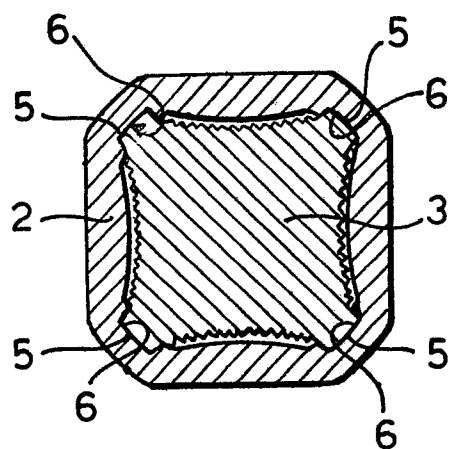


FIG. 5





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	CH-A- 442 168 (THOMASE) * column 2, lines 23-26; figure 4 * ---	1	B 65 D 83/14 B 05 B 11/00
A	FR-A-2 338 196 (L'OREAL) * Page 6, lines 8-19; figures 1-3 * -----	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 05 B B 65 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 09-05-1989	Examiner LEONG C.Y.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			