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Europäisches Patentamt
European Patent Office
Office européen des brevets

11 Publication number:

**0 386 290
A1**

12

EUROPEAN PATENT APPLICATION

21 Application number: **89104102.2**

51 Int. Cl.⁵: **B65D 47/40**

22 Date of filing: **08.03.89**

43 Date of publication of application:
12.09.90 Bulletin 90/37

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84 Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI LU NL SE

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54 **Overflow-preventive bottle stopper.**

57 An overflow-preventive bottle stopper which is to be mounted on a fluid bottle container by means of screw joint to let the fluid be smoothly poured out along a circular wing portion (13) and a circular tube (14) through a curved outlet (15), and to let the overflowed fluid flow back into the bottle container along the circular tube (14) and the circular wing portion (13) through a hole (16) made between there-between. The main feature of the present invention is seal specific bottle container and also to prevent the contained fluid from moistening and staining the bottle container.

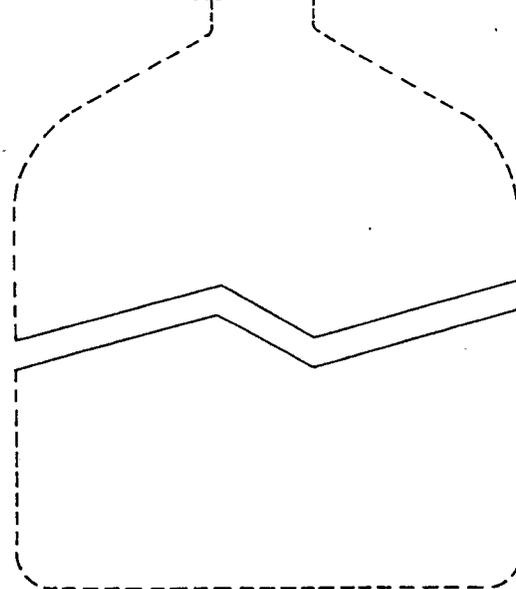
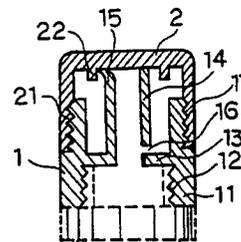


FIG:1

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Overflow-preventive bottle stopper

BACKGROUND OF THE INVENTION

Bottle container has been used for containing fluid several tens of years since. This concept to use the inner space for storage of fluid or something else distinguish the difference of human being from animals.

The materials used for making bottle containers vary with the revolution of human technology. From the origin glass and porcelain bottle containers to the recent polymeric and PET bottle containers, a variety of materials have been used. Same as in the revolution of bottle stoppers or bottle caps, a variety of materials have been used, such as cork or rags in the early days, and metal, polymeric materials, etc., in the recent years to provide better performance.

Because bottle containers are widely used in everywhere, they are normally standardized. In recent years, all bottle containers are normally having a fixed specification of bottle neck and a fixed size of outer thread for screwing up with a cap.

A bottle container is designed for safety storage of fluid, which allows smooth flowing of the fluid contained therein when the fluid is pouring out. Regular bottle containers, salad oil bottles as example, are good for storage of fluid and convenient to pour out the contained fluid. However, these containers have a common problem. Each time after pouring the fluid of a bottle container, the remaining fluid may flow out along the outer surface to the bottom to moisten and stain the bottle and the floor or the desk or anywhere the bottle container is positioned. In order to prevent from contamination, housewives may place a paper board beneath the bottle container. However, this method is still not practical, and the contamination of hands is still inevitable.

In view of said problems, the present invention is designed to provide such an overflow-preventive bottle stopper which is convenient to use and can prevent overflow of any fluid contained in a bottle container.

The objects, features and advantages of the present invention will become apparent from the following detailed description quoted on the basis of the annexed drawing as hereunder.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a sectional view of an overflow-preventive bottle stopper embodying the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to Figure 1, an overflow-preventive bottle stopper, according to the present invention, is comprised of a bottle connector (1) and a stopping cap (2). The bottle connector (1) is a circular hollow means comprising a bottom socket (11) with an inner thread (12) made thereon to match with the outer thread of bottle neck so as to connect with bottle by means of screw joint. A circular wing portion (13) is integrally projecting inward from the bottom socket (11) to further extend vertically upward to form into a circular tube (14), wherein the circular tube (14) has a curved top edge (15) at one side which is projecting outward to further turn downward to serve as a fluid guide, and wherein a hole (16) is made at the vertical corner between the circular wing portion (13) and the circular tube (14). In order to help backward flowing of the remaining fluid which is remained at the inner wall of the stopper when the bottle fluid is pouring out, the circular wing portion (13) is slightly inclining downward to form a difference of elevation with the hole (16) becoming the lowest position.

An outer thread (17) is made on the upper outer wall of the bottom socket (11) of the bottle connector (1) so as to let the bottle connector (1) be connected with the stopping cap (2) by means of screw joint.

The stopping cap (2) is an enclosed circular cap with one side opened for screwing thereinto of the bottle connector (1), having an inner thread (21) specifically designed to match with the outer thread (17) of the bottom socket (11) for screw joint. A cover liner (22) is made in a size to match with the circular tube (14) and set in the inner bottom of the stopping cap (2), so as to tightly close up the stopping cap (2) when the stopping cap (2) is screwed up with the bottle connector (1).

When in application, the bottle connector (1) is firmly attached to the bottle by screwing up the inner thread (12) with the outer thread of the bottle, and then, the stopping cap (2) is firmly attached to the bottle connector (1) by screwing up the inner thread (21) of the stopping cap (2) with the outer thread (17) of the bottle connector (1), such that the bottle is tightly sealed. When to pour out the fluid contained in the bottle, the stopping cap (2) is removed from the bottle connector (1) to let the fluid of the bottle be smoothly poured out along the curved top edge (15). After taking of the bottle fluid, the stopping cap (2) is screwed up with the bottle connector again, and the remaining fluid on the inner wall of the bottle stopper will flow back

along the circular tube (14) through the hole (16) into the bottle. Therefore, no any overflow will happen and no any fluid will moisten and stain the outer surface of the bottle.

The main advantage of the present invention is that the bottle stopper is reusable. When a bottle is used up, the bottle stopper may be removed to mount on a new bottle for repeated use.

According to the present invention, the bottle stopper may be made of high polymeric material through integral injection molding process, and arranged in a variety of sizes to accommodate a variety of bottle containers.

In general, the present invention is to provide such an overflow-preventive bottle stopper having various features each of which tends to make the structure more practical and inexpensive to manufacture.

As indicated, the structure herein may be various embodied. Recognizing various modifications will be apparent, the scope hereof shall be deemed to be defined by the claim as set forth below.

Claims

1. An overflow-preventive bottle stopper, including:

a bottle connector being a circular hollow means comprising a bottom socket with an inner thread made thereon for screwing up with the outer thread of a bottle container, a circular wing portion being to project inward from said bottom socket to further extend vertically upward to form into a circular tube, said circular tube having a curved top edge at one side to project outward to further turn downward to serve as a fluid guide, a hole being made at the vertical corner between said circular wing portion and said circular tube, an outer thread being made on the upper outer wall of said bottom socket for connection thereto of a stopping cap by means of screw joint; and

a stopping cap, being an enclosed circular cap with one side opened for screwing thereinto of said bottle connector, having an inner thread specifically designed to match with said outer thread of said bottom socket, a cover liner being made in a size to match with said circular tube and set in the inner bottom of said stopping cap to tightly close up said stopping cap when said stopping cap is screwed up with said bottle connector.

2. The overflow-preventive bottle stopper as set forth in claim 1, wherein the circular wing portion is slightly inclining downward to form a difference of elevation with the hole, which is made at the vertical corner between the circular wing portion and the circular tube, becoming the lowest position.

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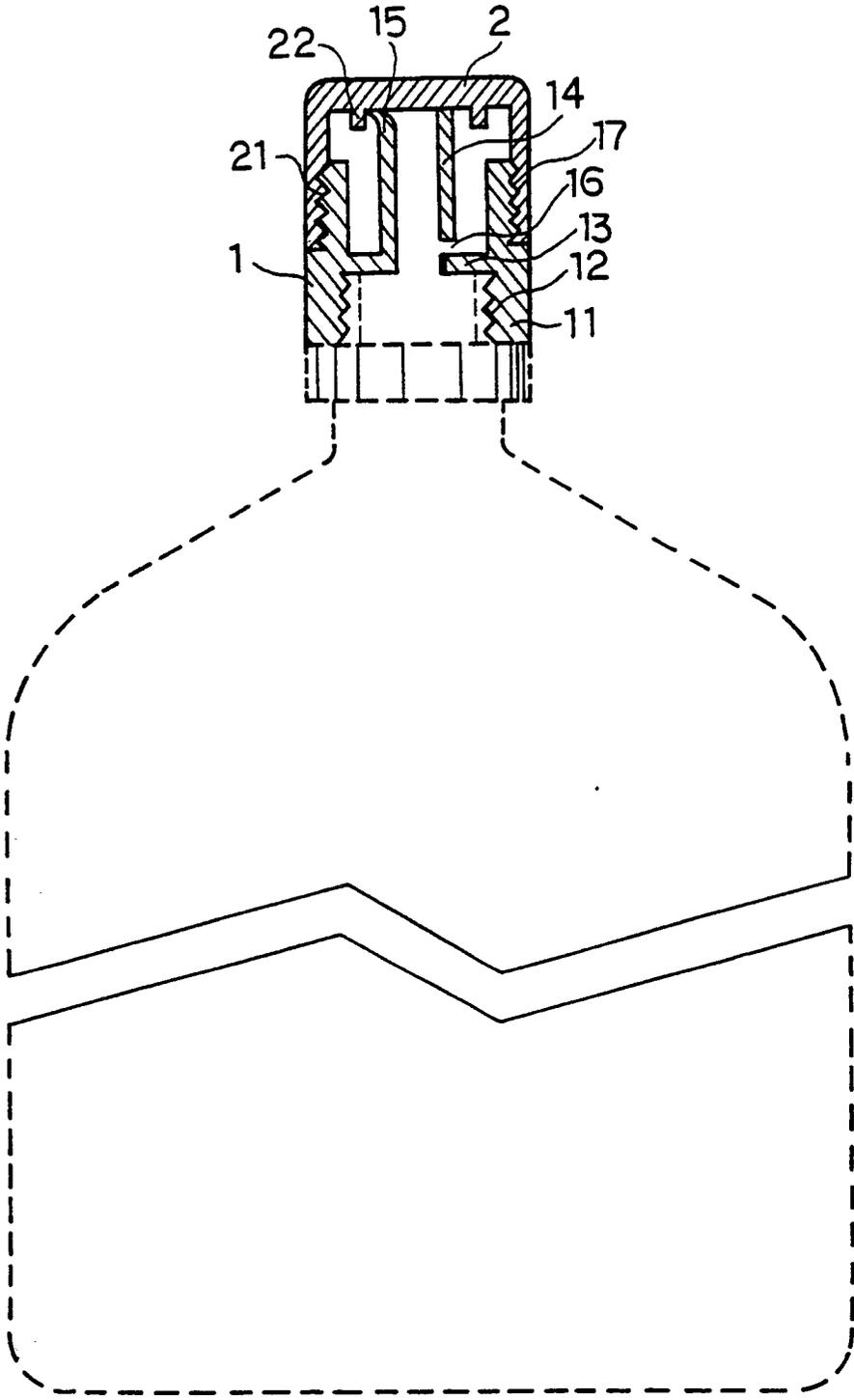


FIG:1



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.5)
Y	US-A-2 763 403 (LIVINGSTONE) * Column 3, lines 38-60; column 7, lines 47-52; column 8, lines 36-46; figures 1,11 * -----	1,2	B 65 D 47/40
Y	EP-A-0 275 833 (ALFATECNIC) * Column 3, lines 53-56; figure 3 * -----	1,2	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			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 17-10-1989	Examiner BRIDAULT A.A.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	