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EUROPEAN PATENT APPLICATION

21 Application number: 89108180.4

51 Int. Cl.4: **B05B 11/00**

22 Date of filing: 05.05.89

30 Priority: 30.05.88 IT 2079688

43 Date of publication of application:
06.12.89 Bulletin 89/49

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

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54 **Improvements in bottles with a dispenser knob.**

57 A bottle for liquid or paste products is provided with a hand pump for dispensing a predetermined quantity of product as the result of pressure exerted on a dispenser knob (5). The bottle (1) comprises counteracting means (10) fixed to the body of the bottle and disposed adjacent to the knob (5) to extend upwards through a height equal to or greater than the height of said knob (5). Said means (10) prevent accidental pressing of the dispensing knob.

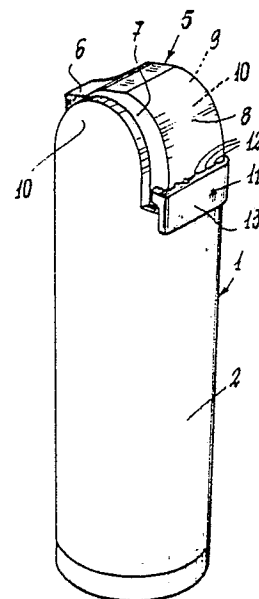


Fig. 1

EP 0 344 483 A2

IMPROVEMENTS IN BOTTLES WITH A DISPENSER KNOB

This invention relates to a bottle for liquid or paste products of the type provided with a hand pump for dispensing a predetermined quantity of product when the pump stem, which projects from the bottle, is pressed axially. On the stem, which is hollow and through which the product to be dispensed emerges, there is mounted a dispenser knob. The knob is traversed by a channel which opens to the outside and is in communication with the cavity of the stem, from which the product emerges when the dispenser knob is pressed.

Such bottles are generally provided with a protection cap which covers the dispenser knob to prevent its operation. This prevents accidental delivery of the product. This could happen for example when the bottle is placed in a bag containing other objects which can rest against the dispenser knob, so causing undesired product delivery.

However, it sometimes happens that the user forgets to place the cap on the dispenser knob before returning it, so that the aforesaid drawbacks can still occur.

An object of the present invention is to provide a bottle of the stated type which even if not fitted with a protection cap does not allow accidental delivery in practice. This obviates the need to provide the bottle with a protection cap.

This and further objects which will be apparent to the expert of the art are attained according to the invention by a bottle provided with a hand pump for dispensing a predetermined quantity of product as the result of pressure exerted on the dispenser knob mounted on the pump stem, said bottle being characterised by comprising counteracting means fixed to the bottle body or integral therewith and disposed adjacent to the knob to extend upwards through a height equal to or greater than the height of said knob. In this manner, because of said counteracting means the knob cannot be accidentally pressed to cause undesired product delivery.

The height of the counteracting means is preferably slightly greater than the height of the knob.

As a further safety measure, the initial part of the stroke of travel of the knob can be idle, prior to operation of the pump.

In this latter case the knob height can be equal to the height of the counteracting means.

As in the case of known bottles, the bottle of the invention can also be provided with a security seal of the tear-off type which prevents the dispenser knob being operated until said seal has been torn off.

The present invention will be more apparent from the description of some embodiments thereof

given hereinafter by way of non-limiting example. Reference will be given hereinafter to the accompanying drawing in which:

Figure 1 is a perspective view of a bottle according to the invention provided with a security seal;

Figure 2 is a partly sectional side view thereof; and

Figure 3 is a partly sectional side view of the bottle of Figures 1 and 2 ready for use.

Figure 3 will firstly be examined, this showing the bottle in the state ready for use, the security seal 11 having already been torn off the bottle and the dispenser knob already being in the position ready for operation. The bottle is indicated overall by 1 and comprises a body or reservoir 2 containing a certain liquid or paste product. From the top of the body 2 there projects a stem 4 of a pump 3, cooperating with a dispenser knob 5 mounted on the stem 4. Said dispenser knob 5 (or more simply knob) has a projecting part 6 from which the product emerges via a suitable nozzle (not visible in the figures) during delivery. The knob 5 has a rounded rear 8 and two flat sides 7 and 9.

Adjacent to the knob 5, in positions corresponding with the two sides 7 and 9 of said knob, there are provided respective lugs 10 having a height slightly greater than the height of the knob 5. Said lugs 10 act as a counteracting means for any object which may accidentally come into contact with the top of the bottle 1 (and consequently with the knob 5), thus preventing its undesired operation. Conveniently, the distance between the lugs is as small as possible but sufficient to enable a finger to be inserted between them for operation.

In this respect, it will be assumed that the bottle 1 is carried in a bag or case. The lugs 10 act as a counteracting means for any object able to come into contact with the top of the bottle, so preventing the knob 5 from being pressed. This could happen only if the the object which makes contact with the top of the bottle has at least one dimension less than the distance between the lugs 10 and is suitably positioned, this being very improbable.

Figures 1 and 2 show the bottle of Figure 3 provided with a usual tear-off security seal 11 having teeth 12 which connect the band 13 of the seal 11 to the lower edge of the rounded rear 8 of the knob 5, the seal being positioned between the lugs 10. The seal 11 prohibits movement of the knob 5 in an axial direction (and thus delivery of the product) and keeps said knob at a height exceeding that of the lugs 10, so that the knob 5 is only partly

mounted on the stem 4 of the pump 3.

After the seal 11 has been removed by tearing off the band 13, the knob has to be properly mounted on the stem 4 of the pump 3, so that the top of the knob lies slightly below the top of the lugs 10 (see Figure 3), the bottle then being ready for use.

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A bottle formed in accordance with the present invention is simple to construct, is safe to transport in a bag, handbag, case or the like, and enables the manufacturer to avoid the construction of separate caps for protecting the knob, with consequent saving in manufacturing and assembly time and consequent cost saving.

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Claims

1. A bottle for liquid or paste products, of the type provided with a hand pump for dispensing a predetermined quantity of product as the result of pressure exerted on a dispenser knob mounted on the pump stem, said bottle (1) being characterised by comprising counteracting means (10) fixed to the body of the bottle (1) and disposed adjacent to the knob (5) to extend upwards through a height equal to or greater than the height of said knob (5).

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2. A bottle as claimed in claim 1, characterised in that the counteracting means are two lugs (10), one for each side of the dispenser knob (5).

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3. A bottle as claimed in claim 2, characterized in that the distance between the lugs (10) is the minimum necessary to enable the knob to be pressed with a finger.

4. A bottle as claimed in claims 1 to 3, characterised in that the initial part of the stroke of travel of the knob is idle prior to operation of the pump.

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5. A bottle as claimed in claims 1 to 4, characterised by comprising a usual security seal (11) cooperating with the dispenser knob.

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6. A bottle as claimed in claim 5, characterised in that the seal (11) is disposed in an intermediate position between the counteracting means (10).

7. A bottle as claimed in claim 1, characterised in that the seal (11) comprises a series of tearable teeth (12) cooperating with the rear (8) of the dispenser knob (5).

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8. A bottle as claimed in claims 5 to 7, characterised in that before the security seal (11) has been removed, the dispenser knob (5) is only partially mounted on the stem (4) of the pump (3), said knob projecting slightly above the counteracting means (10).

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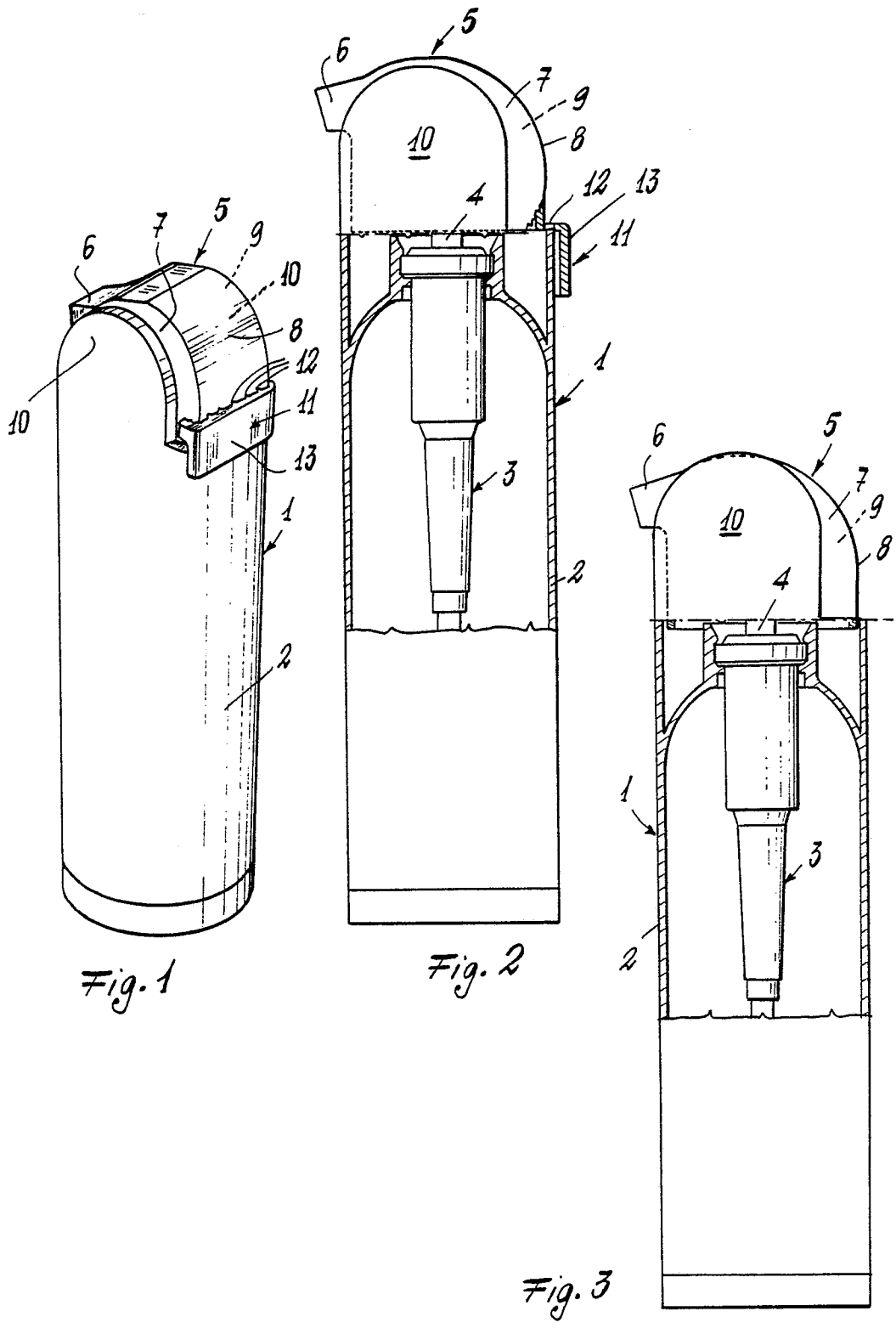


Fig. 1

Fig. 2

Fig. 3