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(54) **Flexible sealing device for a liquid dispenser for a bottle.**

(57) A flexible sealing device (1) for a liquid dispenser (2) for a bottle, the device having a central through bore (3) through which can extend a liquid inlet (2A) of the dispenser (2) the device (1) being able sealingly to fit into the neck of a bottle from which liquid is to be dispensed. The device (1) has blind apertures (5) extending through the material of the device (1) and spaced around its bore (3), these apertures (5) enabling the body of the device (1) to be compressed as it is inserted into the neck of a bottle after the device (1) has been fitted on the liquid dispenser (2), the blind apertures (5) serving to prevent splitting of the device (1) when it is under compression.

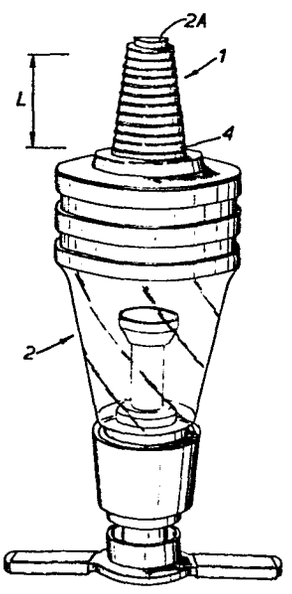

FIG. 1.

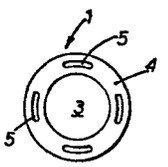

FIG. 2.

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"FLEXIBLE SEALING DEVICE FOR A LIQUID DISPENSER FOR A BOTTLE"

This invention relates to a flexible sealing device for a liquid dispenser for a bottle. More particularly, the invention relates to a sealing device for a liquid dispenser of the kind used to dispense liquids in measured quantities from bottles or other containers. Such dispensers are frequently used in bars for bottles of spirits.

Known sealing devices for such liquid dispensers are made of cork, which tends to split and break-up, thereby allowing the contents of an inverted bottle to run out. Also, corks always have a certain porosity and they tend to stain.

According to the present invention, there is provided a flexible sealing device for a liquid dispenser for a bottle, the device having a central through bore so that the device can fit in a sealing manner about a liquid inlet for the dispenser, and the device also being able sealingly to fit into the neck of a bottle from which liquid is to be dispensed, the device having blind apertures extending through the material of the device and spaced around said bore, these apertures enabling the body of the device to be compressed as it is inserted into the neck of a bottle after the device has been fitted on the liquid dispenser.

For a better understanding of the invention and to

show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawing, in which:-

Figure 1 is a perspective view of a flexible sealing device according to the invention mounted on a liquid dispenser for a bottle, and

Figure 2 is a view of one end of the sealing device shown in Figure 1.

The drawing shows a flexible sealing device 1 mounted on a known liquid dispenser 2 of the kind used to dispense liquids in measured quantities from bottles. The dispenser 2 has a liquid inlet 2A and is able to be mounted on the neck of a bottle by means of the sealing device 1.

The sealing device 1 is flexible and can be made of an elastomeric material such as a thermoplastic material, which could be rubberised plastics. The device 1 has a central, cylindrical through bore 3 so that the device can fit in a sealing manner about the liquid inlet 2A of the dispenser. The outer profile of the device 1 is tapered and preferably stepped as shown in Figure 1 so as to be accommodated in the necks of a variety of bottles.

Figure 2 shows the inner end 4 of the device 1 that is pushed onto the dispenser 2. In order for the body of the device to be compressed easily as it is inserted into the neck of a bottle after the device has been fitted on the liquids dispenser 2, blind apertures 5 are provided which extend through the material of the device 1 and are spaced around the bore 3. In the example shown, the apertures 5 are in the form of arcuate slots. Each aperture 5 extends over a length L of the device 1 (Figure 1) and can follow the taper of the device.

It will be seen that the present sealing device is leakproof and non-porous, and the provision of the blind apertures 5 tends to prevent the device from

splitting when the device is under compression.

The sealing device can be injection moulded and should have inert properties so as to be non-staining and so as not otherwise to react with the liquid in the bottles.

CLAIMS:

1. A flexible sealing device (1) for a liquid dispenser (2) for a bottle, the device having a central through bore (3) so that the device can fit in a sealing manner about a liquid inlet (2A) for the dispenser, and the device also being able sealingly to fit into the neck of a bottle from which liquid is to be dispensed, characterised in that the device has blind apertures (5) extending through the material of the device and spaced around said bore, these apertures enabling the body of the device to be compressed as it is inserted into the neck of a bottle after the device has been fitted on the liquid dispenser.

2. A device as claimed in claim 1, characterised in that said blind apertures are in the form of arcuate slots extending longitudinally of said bore.

3. A device as claimed in claim 1 or 2 characterised by an outer profile which is tapered longitudinally of said bore.

4. A device as claimed in claim 3, characterised in that said apertures follow the taper of the device.

5. A device as claimed in any one of the preceding claims, characterised by an outer profile which is stepped longitudinally of said bore.

6. A device as claimed in any one of the preceding claims and being made of thermoplastics material.

7. A device as claimed in claim 6 and being made of rubberised plastics material.

8. A device as claimed in any one of the preceding claims, characterised in that the device has been formed by injection moulding.

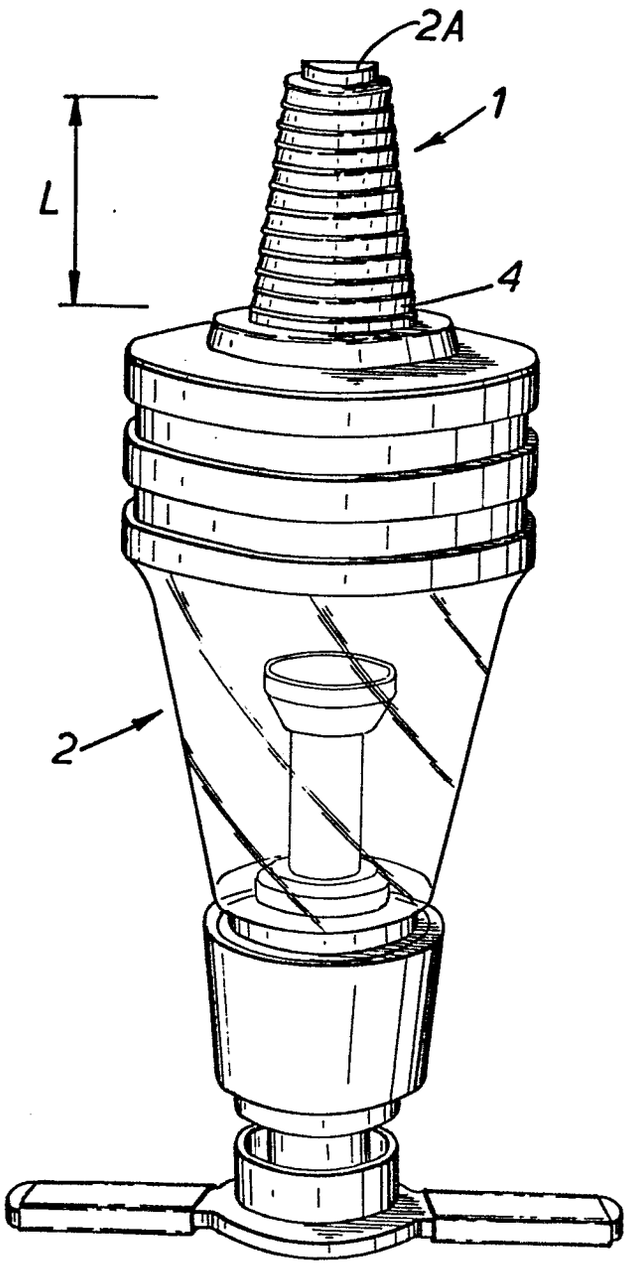

FIG. 1.

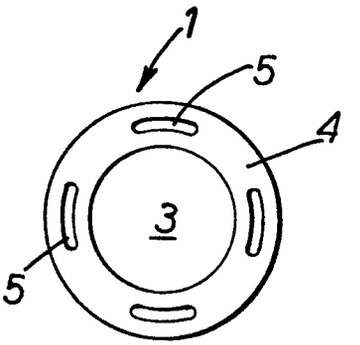

FIG. 2.

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European Patent Office

EUROPEAN SEARCH REPORT

Application number

EP 82302985.5

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	US - A - 3 195 757 (CREAMER et al.) * Claims; fig. 3, 4 *	1,3,4,7
A	DE - C - 927 556 (WIECKMANN, HUFNAGEL) * Totality, especially fig. 4, 6 *	1,2,6
A	GB - A - 458 227 (MARXEN) * Totality, especially page 1, lines 8-21; fig. 8 *	1,3
A	GB - A - 714 758 (GARNER) * Fig. 1-4 *	

CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)

B 65 D 39/04

TECHNICAL FIELDS SEARCHED (Int.Cl. ³)

B 65 D 25/00
B 65 D 39/00
B 65 D 47/00

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

X The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
VIENNA	06-10-1982	CZUBA