Aug. 29, 1944. O. M. FAZEKAS 2,356,755

DISPENSER FOR LIQUIDS

Filed Jan. 16, 1941

Fig. 1.

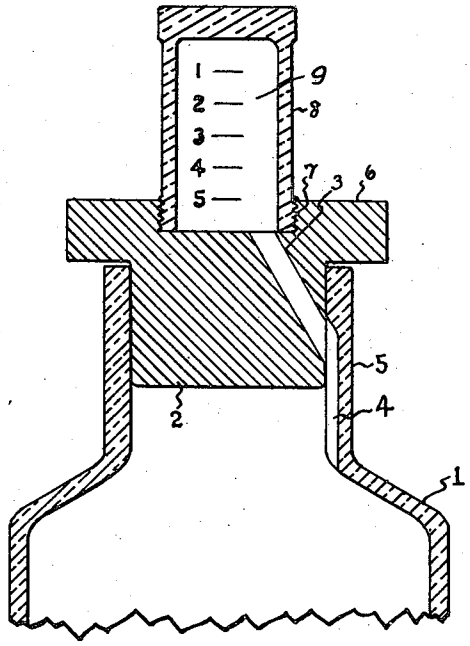
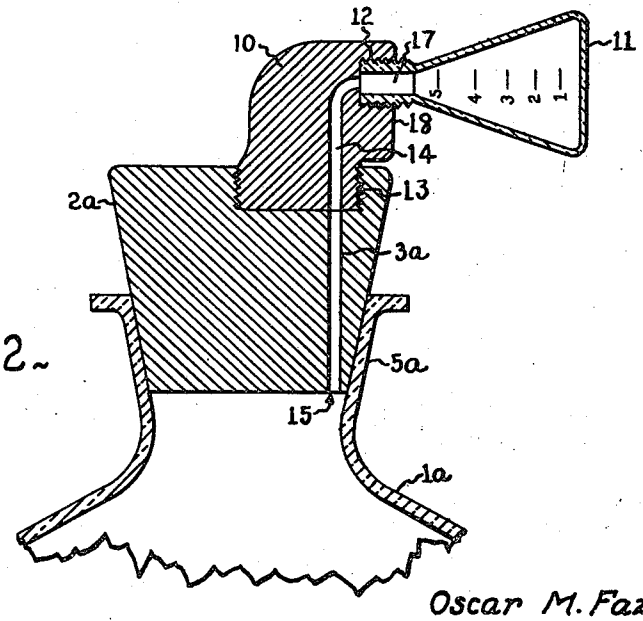



Fig. 2.




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## DISPENSER FOR LIQUIDS

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2 Claims. (Cl. 222—417)

My invention consists of means of dispensing of liquids, or the like, which must be kept sterile, safeguarding the antisepsis during the dispensing and until the separated amount of liquid is put into actual use.

The object of the invention consists in the combination of two or more stopper elements for bottles and the like, communicating with each other and the bottle, the one stopper being shaped as a smaller container, to be filled in its airtight position from the bottle and to be removed, together with its sterile content after its communication with the bottle has been interrupted, the other stopper serving to establish and to interrupt, respectively, the connection between the container and bottle, by means of their corresponding ducts.

Another object of the invention consists in the combination of two or more stopper elements for bottles and the like, communicating with each other and the bottle, by means of their corresponding ducts and permitting or interrupting the flow, independently of one another, in order to provide a sterile stopper as an article of commerce for different sizes of existing bottles.

These and various other objects are attained by the construction hereinafter described and illustrated in the accompanying drawing, wherein:

Fig. 1 is an axial vertical sectional view of a bottle neck equipped with a distributor for liquids as per one embodiment of my invention.

Fig. 2 is a similar view illustrating another embodiment of the invention.

In the accompanying drawing Fig. 1, is a vertical section of an embodiment of a sterile distributor in its working posiiton: bottle 1 is closed airtight by means of the stopper 2, which is provided with a duct 3 leading outwards, being—in the working position of the stopper 2—in communication with the corresponding recess 4 in the inner wall of the bottle neck 5, thus permitting the flow of the liquid. This access is gained and interrupted respectively by turning the stopper 2 in the position desired. The top 6 of the stopper 2 is provided with suitable joints 7 for the removable joining of a second stopper 8, which appears in the shape of a smaller container 9, preferably transparent and scaled (graduated) to act, e. g., as an ampule for one or more dosages of hypodermic injections. It is shown in its working position, communicating with the bottle 1 by way of duct 3.

In order to procure the necessary amount of the liquid contained in the bottle 1, we make the liquid pour by inclining the bottle in the usual way—through the duct 3 until the container 9 is filled up to the desired scale level. Then we stop pouring and turn the stopper 2 in its closed position, and thus interrupt its communication with the bottle 1 through the recess 4. Now, the second stopper 8 in its upright position, can be unscrewed and the separated sterile dosage in the container 9 be put in use.

The second stopper 8, previously referred to and its joints 7 in the first stopper 2 are to be shaped preferably as standard models, whereupon the bottle could be distributed in several dimensions or shapes without adding a second stopper, a standard container being already in the possession of the previous consumers.

The form and the positioning of the second stopper 8 and of the container 9 as well as of their joints 7 can be suitably shaped in different ways, to meet other requirements also; e. g. the stopper 8 embracing with its edges the outer periphery of the top of the stopper 2, or in a horizontal position in order to enable the user to check the amount of liquid poured in the container 9 immediately, without tentative pourings, etc.

According to the embodiment shown in Fig. 2, a perforated connecting element 10 is interposed between the stopper 2 and the second stopper 11 by means of screw threads 12 and 13 respectively, provided with a canal 14, communicating with the bottle 1 in its working position by way of the passage 3 of the stopper 2. When using this embodiment of the distributor, no duct 4 in the bottle neck is necessitated, because the access of the flow can be regulated by means of the connecting element 10.

Functioning of this embodiment is an analogous one to that described above, but opening and closing of the communication of the bottle 1 is here performed by turning the connecting element 10 in its desired position, since the inlet 15 of the stopper 2 is placed in this instance in the periphery of the bottom 16 of the stopper 2 and therefore not to be closed.

In Fig. 2, the inlet 17 of the stopper 11, shaped as an ampule is placed in the side part 18 of the connecting element 10 in a horizontal position, by means of the joints 13, illustrating the form enabling the user to check—when pouring the liquid—on the desired scale level 19 in the upright position of the container 11.

I claim:

1. A distributor for liquids comprising a stopper removably engageable in the neck of a bottle

and formed with a discharge duct extending from the inner end to the outer portion of the stopper, a connecting element rotatively mounted on the stopper and formed with a passage adapted to be connected with or disconnected from said duct by rotation of said element, and a small container detachably mounted on said element in communication with said passage.

2. A distributor for liquids comprising a stopper removably engageable in the neck of a bottle and formed with a recess in its outer end and with a discharge duct extending from its inner end to said recess, a connecting element having a portion entered in said recess and rotative substantially about the axis of said recess, and having a passage at one side of said axis adapted to be connected to or disconnected from said duct by rotation of the connecting element about said axis, and a small container detachably mounted on the connecting element in communication with said passage.

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