June 20, 1933. W. ZALOSCHAN 1,914,766

BOTTLE CAP

Filed July 7, 1932

Fig. 1.

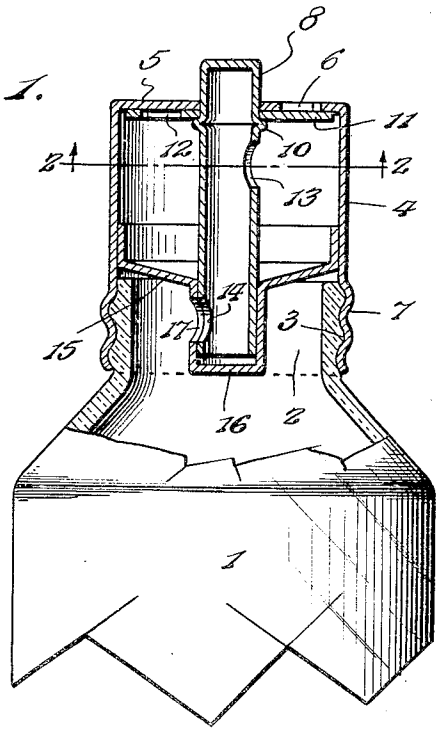


Fig. 3.

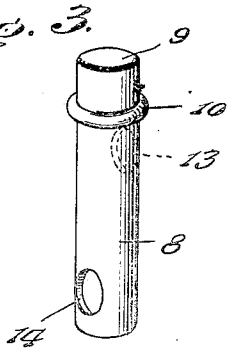
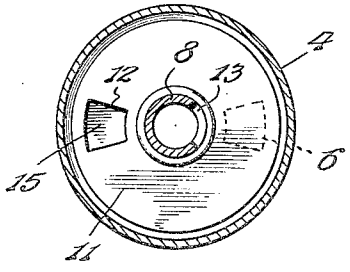


Fig. 2.



Inventor

William Zaloschan.

By Lally & Lally, Attorneys

Patented June 20, 1933

1,914,766

UNITED STATES PATENT OFFICE

WILLIAM ZALOSCHAN, OF CHICAGO, ILLINOIS

BOTTLE CAP

Application filed July 7, 1932. Serial No. 621,244.

This invention relates to closures for containers and is intended primarily for application to medicine bottles but is adapted to be applied to other containers from which it is desirable to discharge measured quantities of material. The object of the invention is to provide a cap which may be easily manipulated to effect a discharge of a measured quantity of the contents of a container and which may be adjusted to prevent release of more than the desired quantity and to prevent ultimate discharge of the material until further flow from the container has been cut off. The invention is illustrated in the accompanying drawing and resides in certain novel features which will be hereinafter first fully described and then more particularly defined in the claims.

In the drawing, Fig. 1 is a view, partly in elevation and partly in vertical section, of a portion of a container having my improved cap applied thereto,

Fig. 2 is a horizontal section on the line 2—2 of Fig. 1,

Fig. 3 is a detail perspective view of the measuring tube.

In the drawing, the reference numeral 1 designates a portion of a bottle upon the mouth 2 of which are external ribs or threads, as indicated at 3. The cap constructed according to my invention includes a cylindrical outer casing 4 having a closed outer end 5 provided with an opening 6 therethrough at some point eccentric to the axis of the cap. The lower open end of the cap is provided with threads, as indicated at 7, whereby it may be readily applied to and turned home on the mouth of a bottle or other container. The closed end of the casing 4 has a central opening which receives the upper end of a measuring tube 8 which is of a cylindrical form having a closed upper end 9 and of such diameter that it will fit closely in the central opening of the cap but may turn therein. Near the upper end of the measuring tube, an annular bead 10 is formed thereon and a valve disk 11 is mounted upon and secured to the measuring tube immediately above the bead so as to rest on the bead and turn with the tube, and this valve disk has an opening 12 formed therethrough so located and of such form and dimensions that it may, at times, register with the outlet opening 6 in the cap and thereby permit an outflow of the material which has been admitted to the cap. The measuring tube is provided with an opening 13 in its side immediately below the bead 10 and near its lower end a diametrically opposite opening 14 is formed in the tube, as shown and as will be understood. Secured in any convenient manner within the casing 4 is a partition 15 which is so located as to lie just above the mouth of the bottle or other container and entirely cut off direct communication between the container and the interior of the cap casing 4. The partition, as shown in Fig. 1, extends to the measuring tube 8 and at its center is formed with a socket or boss 16 which fits closely around the measuring tube, as shown in Fig. 1, and is provided with an opening 17 in its side with which, at times, the opening 14 in the tube will register.

The use of the device will, it is thought, be readily understood and appreciated from the foregoing description taken in connection with the accompanying drawing. The container is filled with the medicine or other commodity and the cap is then applied thereto in the position shown in Fig. 1, and it will be noted that in this position the openings 14 and 17 are alined while the opening 12 is at the same side of the tube as the openings 14 and 17 and the opening 6 is covered or closed by the valve 11. If the container be now tilted without disturbing the position of the measuring tube and in such manner that the opening 6 will be at the low side of the cap, the contents of the container will flow through the openings 17 and 14 into the measuring tube and then along the tube to pass through the opening 13 and collect in the chamber defined by the partition 15 and the casing 4. If the container be now set upright, so much of the commodity as may be within the measuring tube or above the lower side of the opening 13 may flow back to the container but all of the commodity which is below the opening 13 and outside the measuring tube will

be retained in the chamber of the cap and will be supported by the partition 15. If the measuring tube be now turned until the opening 12 alines with the opening 6, discharge of the material in the chamber of the cap will be effected through the openings 12 and 6 in an obvious manner. If, before returning the container to an upright position, the measuring tube be turned through one quarter of a revolution none of the commodity which has passed from the container will be permitted to return thereto and then, when the tube is given a further quarter turn, the entire quantity of the commodity which may have passed into the chamber of the cap will flow through the alined openings 12 and 6.

The device is exceedingly simple in construction and neat in appearance and effective in operation. It may be very easily applied to or removed from any container and while it is designed primarily for use upon bottles of medicine it may be employed to prevent wasteful discharge of dentifrice from its container or for delivering measured quantities of other materials. All of the parts of the device may be stamped from sheet metal so that it may be produced rapidly and cheaply, and the partition may be easily secured in the cap by soldering or brazing and the boss or socket on the partition serves as a lower bearing for the measuring tube so that the tube cannot be displaced.

Having thus described the invention, I claim:—

1. A closure for containers comprising a casing adapted to fit upon the mouth of a container and having a closed outer end provided with an eccentric opening therethrough, a measuring tube disposed centrally through the upper closed end of the cap and provided within the cap adjacent its opposite ends with diametrically opposite openings, and a partition secured in the cap and arranged to extend over the mouth of the container and around the measuring tube at a point above the lower opening therein.

2. A closure for containers comprising a cylindrical cap having a closed outer end and adapted at its inner end to be fitted about the mouth of a container, said cap being provided in its closed outer end with a central opening and an opening eccentric thereto, a measuring tube having an upper end extending through the central opening of the cap whereby it may be grasped and rotated, said tube being provided adjacent its opposite ends and at diametrically opposite sides with openings within the container, a valve carried by the measuring tube and having an opening therethrough arranged to aline at times with the eccentric opening in the cap, and a partition secured in the container and extending therefrom to the measuring tube to fit around the same.

3. A closure for containers comprising a cylindrical cap having its inner end adapted to fit about the mouth of a container and its outer end provided with an eccentric discharge opening and a concentric opening, a measuring tube having its upper end fitted through the central opening of the cap and provided within the cap with diametrically opposite openings adjacent its opposite ends, a valve disk carried by the measuring tube above the upper opening therein and having an eccentric opening adapted at times to aline with the eccentric opening in the cap, and a partition secured within the cap and arranged to extend over the mouth of the container and provided with a central socket fitting closely around the lower end of the measuring tube and provided in its side with an opening adapted to at times aline with the lower openings in the measuring tube.

In testimony whereof I affix my signature.

WILLIAM ZALOSCHAN. [L. S.]