

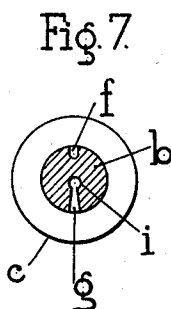
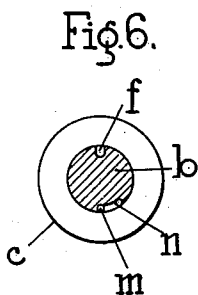
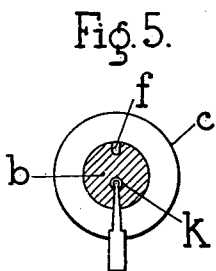
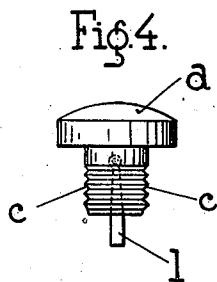
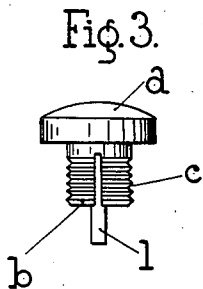
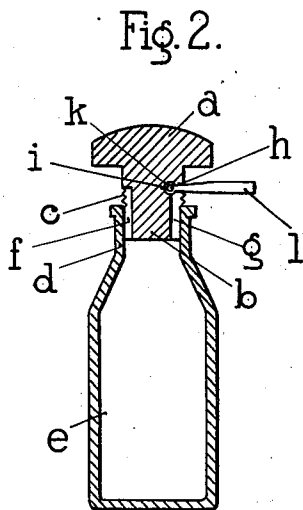
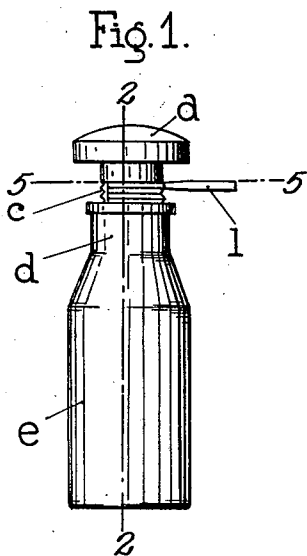
April 2, 1935.

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1,996,533

DROPPING STOPPER

Filed Sept. 20, 1933



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UNITED STATES PATENT OFFICE

1,996,533

DROPPING STOPPER

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Application September 20, 1933, Serial No. 690,276
In Germany December 7, 1931

2 Claims. (Cl. 221-148)

I have filed applications in Germany, on December 7, 1931, Belgium on November 5, 1932, England, October 31, 1932, France, October 17, 1932, Switzerland, October 31, 1932 and Italy, November 30, 1932.

This invention relates to a dropping stopper provided with a special dropping device.

The feature of the invention is that in the outlet channel a dropping rod is movably arranged so as to be adjustable vertically as well as parallel to the axis of the stopper.

By way of example, the invention is illustrated in the accompanying drawing, in which Figure 1 shows the stopper ready for use; Fig. 2 is a vertical section on the line 2-2 of Fig. 1; Fig. 3 shows the stopper with the dropping device out of use; Fig. 4 is a side view of the stopper; Fig. 5, a horizontal section on line 5-5 of Fig. 1 on an enlarged scale of the lower end of the stopper; Fig. 6, a horizontal section on an enlarged scale of the lower end of another form of stopper on the line 5-5 of Figure 1; and Fig. 7, a horizontal section of the lower end of the stopper on the line 5-5 of Figure 1, but without a dropping device.

Referring to the drawing, the conical or cylindrical portion of the stopper *a* consisting of rubber or the like and the lower thinner portion *b* thereof are provided with very fine elevations *c* so as to form a plurality of grooves. The resilient elevations *c* of the part *a* serve the purpose of insuring tight closing and of reducing the adhesiveness of the rubber while the grooves formed by the elevations in the lower end of the stopper hold the latter in raised position.

The lower elevations are therefore exclusively intended to bring about a clamping effect when the stopper is raised. The two lower grooves of the part *a* are preferably somewhat larger to insure secure seating of the upper part of the stopper on and in the neck *d* of the glass bottle *e* as soon as the dropping device is in a position for use.

The stopper is provided with an air slit or channel *f* and a dropping channel *g* which may have at its upper end *h* a bulge *i* for the reception of the spherical rear end *k* of the dropping rod *l*, the end *k* being clamped in the bulge *i* to permit the front end of the rod *l* to be turned up and down like a hinge. When the rod *l* is turned down, it will be accommodated in the slit *g*. When the dropping bottle is to be used, the front end of the rod *l* is moved up into horizontal or almost horizontal position, as shown in Figs. 1 and 2.

According to Fig. 6, a glass tube *m* may be used as dropping channel, the top end *n* of the tube *m* being then angularly bent.

The resilient portions or elevations *c* perform an important purpose or function in that they, by their cooperation with the upper and lower portions of the stopper, serve to clamp the raised stopper in the neck of the bottle.

I claim:—

1. A stopper having one end formed to be received within the mouth of a bottle and engage the wall of such mouth and a relatively slender dropping element pivotally secured to the body of the stopper at a point between the ends thereof, said body having a pair of parallel grooves extending into the interior from the surface thereof, one of said grooves being arranged to form with the wall of such mouth a venting channel, and the other groove extending from said point and being shaped to snugly receive said element and to coact with the wall of said mouth, when said element is arranged substantially perpendicular to the body, to form a channel for conducting liquid from the interior of the bottle to said element.

2. A structure such as defined in claim 1, wherein the body is made of rubber and provided between said grooves with threads for engaging the wall of the bottle mouth.

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