(No Model.)

P. B. MOORE.

ANTI-FILLING VALVE FOR BOTTLES.

No. 485,395. Patented Nov. 1, 1892.

Fig. 1.

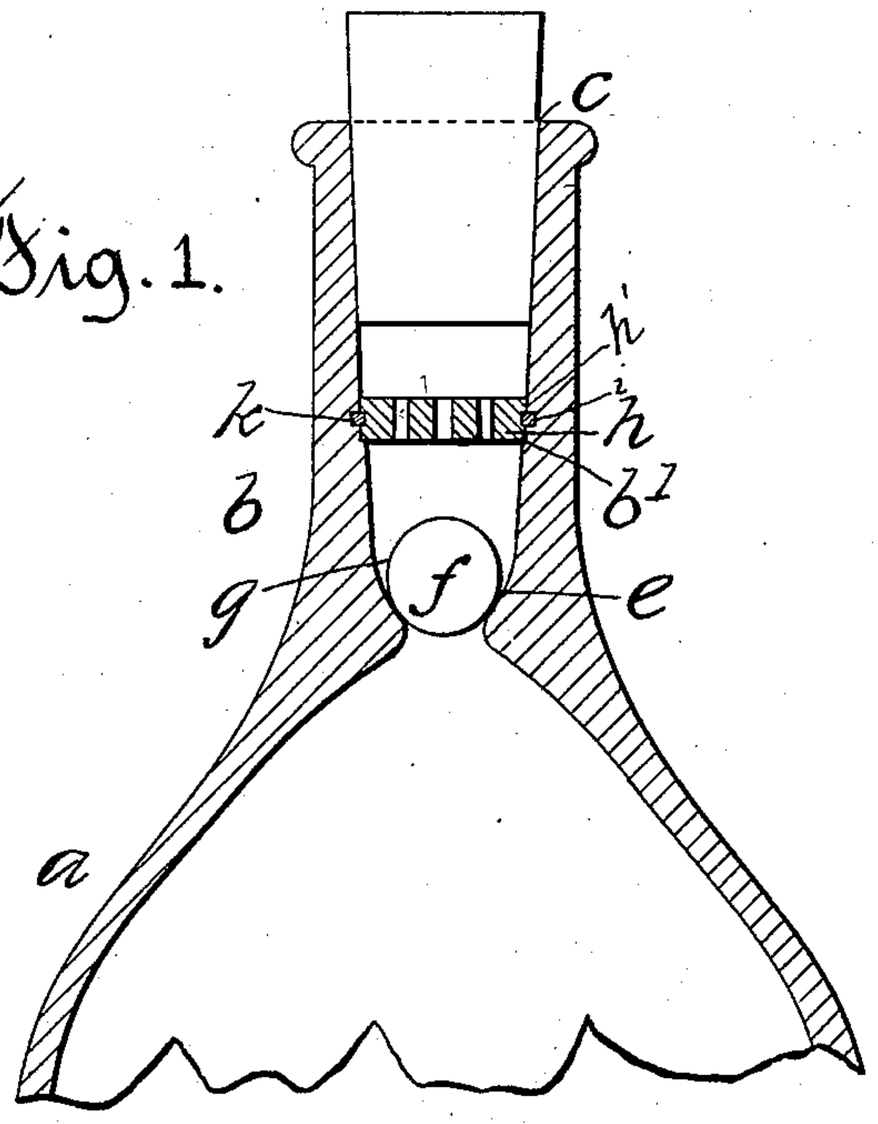


Fig. 2.

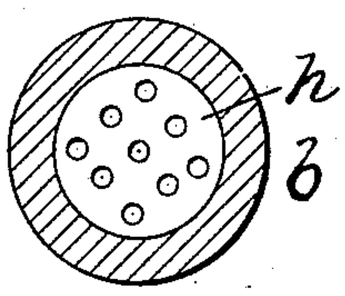
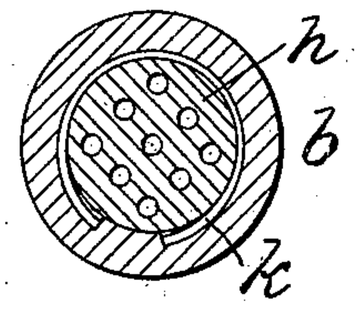


Fig. 3.



Witnesses
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ANTI-FILLING VALVE FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 485,395, dated November 1, 1892.

Application filed June 29, 1892. Serial No. 438,412. (No model.)

To all whom it may concern:

Be it known that I, PRENTICE B. MOORE, of North Wilbraham, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Anti-Filling Valves for Bottles, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

The object of my invention is to provide a bottle or like vessel with means that will enable the fluid contents of such bottle to be readily poured out, but will prevent the refilling of the bottle or the returning to it of any fluid.

To this end my invention consists in the details of the several parts making up the device as a whole and in the combination of such parts, as more particularly hereinafter described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a detail view in vertical central section of the head and neck of a bottle embodying my invention. Fig. 2 is a detail view in cross-section through the neck of the bottle, looking down upon a perforated disk. Fig. 3 is a detail view in central section of the neck, passing through the locking-groove.

In the accompanying drawings my invention is shown as embodied in a bottle that is of any ordinary material, as of glass, and of the usual form, and the letter *a* denotes the body of the bottle, *b* the neck, and *c* the mouth. The opening *d* is preferably contracted at *e* and forms the seat for a valve *f*, that is preferably a ball, as the most convenient form of valve and one which offers the least obstruction to the passage of a fluid around it. This valve is located in a valve-chamber *g*, that is formed by securing a disk *h* at a suitable distance in the opening in the neck of the bottle above the valve-seat. This disk is perforated and has a groove *h'* in its edge, the diameter of the disk being such as to cause it to fit quite snugly within the opening, and within the neck of the bottle there is formed a locking-groove *i*, that may be continuous or may be formed in two or more parts sufficient to serve as a socket into which a locking-spring *k* may project. This disk is made, preferably, of vitreous material, as glass, in order to be readily cleaned and is preferably of the same kind of material as the bottle in the mouth of which it is to be secured, so that the two materials shall have, practically, the same coefficient of expansion when the disk is so made as to fit snugly within the opening. The disk may be provided with any elastic locking means located in the groove, although a metallic spring made of a non-corrosive material is preferred. When this disk is secured in place, it forms a chamber within which the valve is free to move and allow any fluid that has been placed in the bottle to be readily poured out. This disk is so constructed and secured in place as to be removed only by destruction of the disk. The opening in the bottle is preferably formed with the contraction shown in the process of manufacture.

The opening in the neck of the bottle is preferably provided with a shoulder *b'*, which determines the distance at which the disk *h* may be placed and determines the height of the chamber *g* when the disk is in place. The disk may be made so as to fit snugly within the neck, if the opening is slightly tapered, and also of such a diameter as to enable it to be held in place in the socket formed just above the shoulder *b'* by the frictional contact or hold of the edge of the disk upon the ground inner surface of the neck of the bottle. In this case it is obvious that the shoulder will not be required to limit the position of the disk, as that will be controlled by its diameter, and a chamber of any desired height can be formed by selecting a disk of proper diameter with relation to the diameter of the tapered opening in the neck of the bottle.

I claim as my invention—

1. In combination with a bottle having an outlet the walls of which are shaped to form a contracted throat, a perforated disk having an annular groove and located within the opening, the locking-spring located in the groove in the disk, and the ball-valve located within the valve-chamber, all substantially as described.

2. In combination with a bottle having an outlet the walls of which are shaped to form a contracted throat and provided with a shoul-

der forming a disk-seat, a groove in the wall above the disk-seat, a perforated disk having an annular groove and located within the opening, a locking-spring located between the edge of the disk and the neck of the bottle, and the ball-valve located within the valve-chamber, all substantially as described.

3. In combination with a bottle having an outlet the outer walls of which are tapered from a contracted throat toward the mouth, a shoulder formed in the wall above the contraction, a groove in the wall above the shoulder, forming a spring-socket, a perforated disk seated on the shoulder, a locking-spring located in said socket, and a ball-valve located within the valve-chamber below the perforated disk, all substantially as described.

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