(No Model.)

F. B. HODGSON & R. H. RICKARDS.

NON-REFILLABLE BOTTLE.

No. 591,763. Patented Oct. 12. 1897.

Fig. 1.

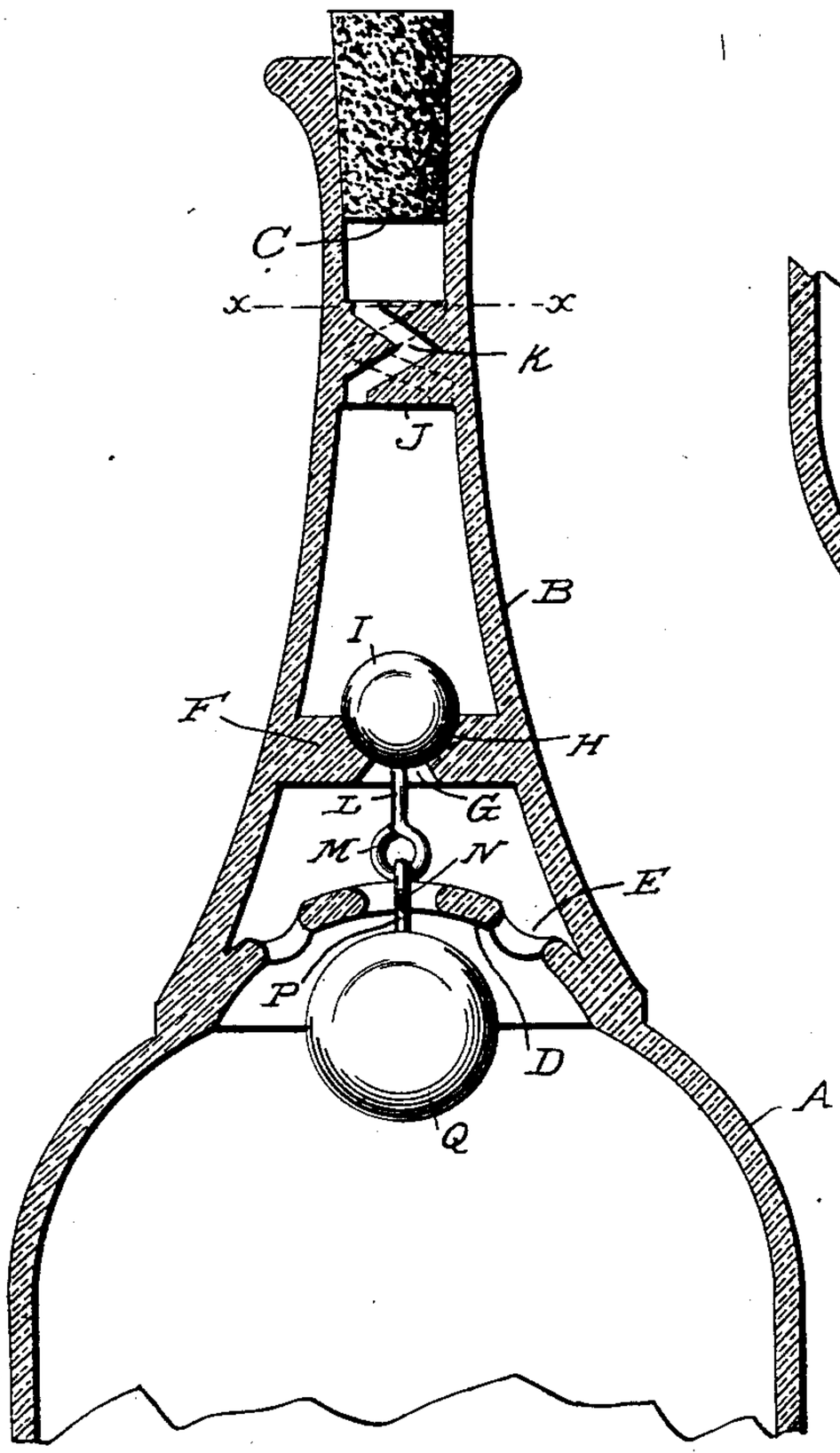


Fig. 2.

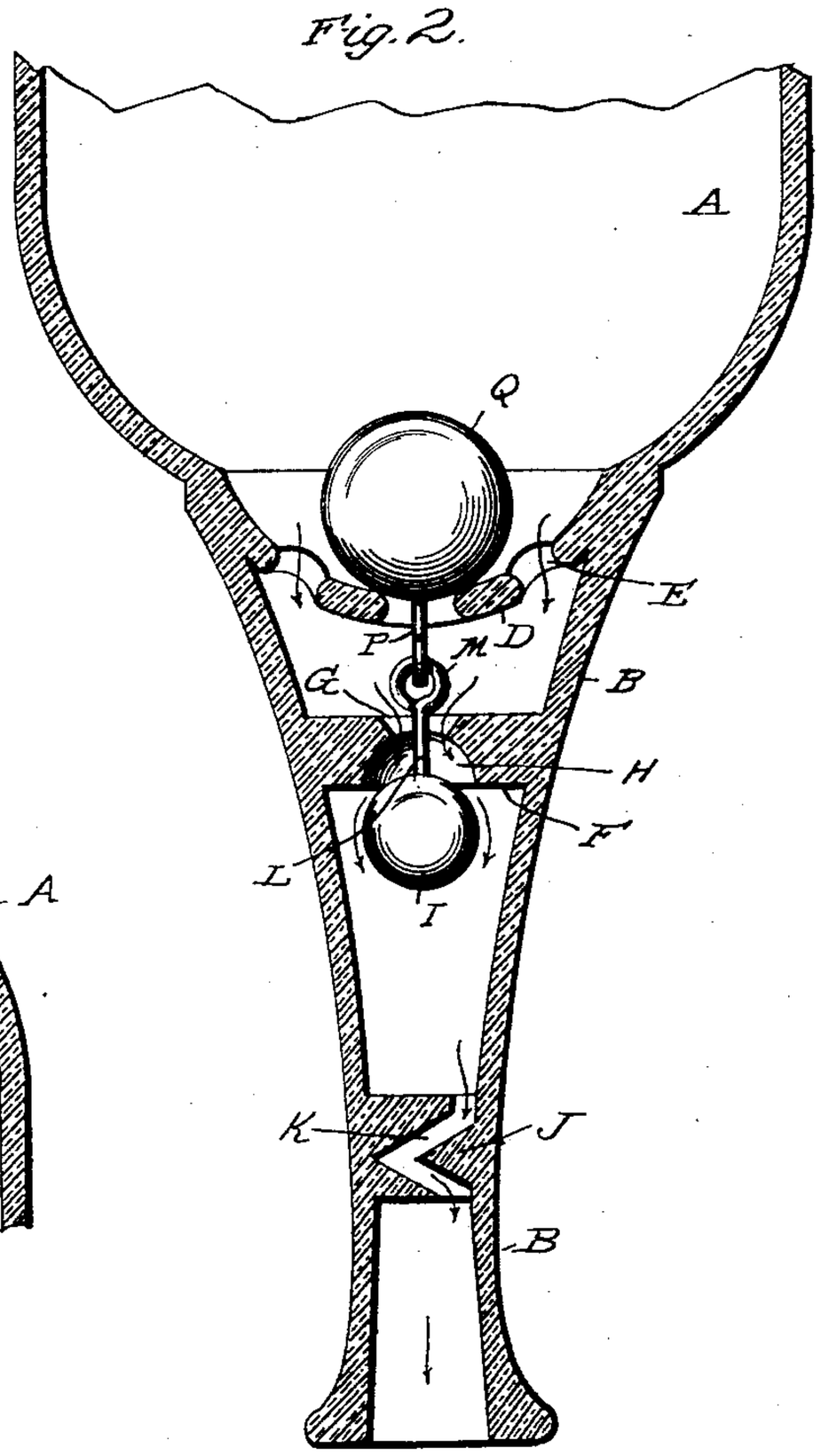
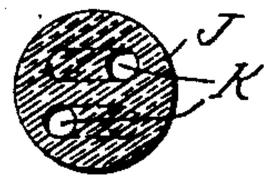


Fig. 3.



Witnesses:
C. F. Randolph
J. D. Feeney.

Inventors
F. B. Hodgson &
R. H. Rickards
By James J. Shelby
Attorney

UNITED STATES PATENT OFFICE.

FRANK B. HODGSON AND RALPH H. RICKARDS, OF BLACKSTONE, MASSACHUSETTS.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 591,763, dated October 12, 1897.

Application filed December 19, 1896. Serial No. 616,238. (No model.)

To all whom it may concern:

Be it known that we, FRANK B. HODGSON and RALPH H. RICKARDS, citizens of the United States, residing at Blackstone, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Non-Refillable Bottles; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in that class of bottles which are constructed with a view of preventing unscrupulous persons from refilling them; and its novelty and advantages will be fully understood from the following description and claim, when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a diametrical section of the upper portion of a bottle embodying our invention. Fig. 2 is a similar view of the bottle in an inverted position, and Fig. 3 is a transverse section taken in the plane indicated by the line *x x* of Fig. 1.

Referring by letter to the said drawings, A indicates the body of the bottle, and B indicates the neck thereof, which is designed to receive an ordinary stopper C in its upper end, as illustrated.

The neck B is provided adjacent to its juncture with the body with the partition-wall D, which is concavo-convex for a purpose presently described, and also has a plurality of apertures E, as shown. Said neck B is also provided at about the proportional distance illustrated above the wall D with a second wall F, in which is formed a central aperture G and which has a seat H in its upper side to receive a ball-valve I, as shown in Fig. 1. To prevent unauthorized raising of such ball-valve from its seat, the neck B is also provided, above the wall F, with a wall J, having two (more or less) zigzag or tortuous passages K, which will permit the liquor to flow out of the bottle and yet will effectually resist the introduction of any instrument capable of engaging and raising the ball-valve.

The body A, neck B, and walls D, F, and J of the bottle are shown in the drawings as made in one piece. This manner of making the bottle, however, forms no part of our invention, and, if it is found difficult or impractical to so make the bottle, the parts mentioned may be connected in any manner suitable to the purposes of our invention.

The ball-valve I may be made of any material suitable to the purposes of our invention, and it is provided with an arm L, which extends through the aperture G of wall F and terminates in an eye M. This eye M is interlocked with the eye N at the end of an arm P, connected with a weight Q, which is globular, as illustrated, for a purpose presently pointed out.

When a bottle embodying the construction and equipped with the devices pointed out in the foregoing description is filled with liquid and it is desired to discharge it of all or a portion of its contents, it is simply necessary to invert it and hold it in a vertical position or a position approaching the same, as shown in Fig. 2. This being done the weight Q will assume the position shown in said figure, the valve I will fall from its seat, and a free passage for the liquid will be afforded through the apertures of wall D, the aperture G of wall F, and the apertures K of wall J. When, however, the bottle is returned to its upright position or any position approaching the same that would enable liquid to flow down the neck and into the body A, the weight Q will fall and will draw and hold the valve to its seat, and thus effectually prevent the introduction of a liquid or other substance into the bottle. The weight Q being globular and the under side of wall D being concave, it will be seen that there is nothing for said ball-weight to lodge against and that therefore it will perform its function of drawing and holding the valve to its seat as soon as the bottle is placed in a position to permit of liquid being poured down the neck and into the body of the same.

It will also be seen that when the bottle is inverted the globular weight will immediately assume a position in the center of the concavo-convex wall D, so as to permit the liquid to freely flow through those apertures of said wall D which are of the center.

The specific connection shown of the ball-

valve with the weight is preferable, but we do not desire to be understood as confining ourselves to the same, as any connection suitable to the purposes of the invention may be employed.

At the time of manufacturing the bottle we contemplate laying a flexible wire or the like in one of the passages K of wall J and looping it around or otherwise detachably connecting it to the ball-valve. By this means the valve may be raised and the bottle filled by pouring the liquid into the upper end of its neck, after which the wire may be withdrawn, so as to permit the valve to operate in the manner described.

Having described our invention, what we claim is—

The herein-described bottle comprising essentially the body, the neck connected with the body and having the concavo-convex wall D, arranged with its concave side contiguous to the interior of the body and provided with a plurality of transverse apertures off its center, the wall F, arranged in and connected to the neck above the wall D, and having the central aperture and also having the valve-seat H, in its upper side, the wall J, arranged in and connected to the neck above the wall F, and having one or more tortuous passages K, the ball-valve arranged above the wall F, and adapted to occupy the seat H, thereof, the globular weight arranged below the concavo-convex wall D, and the flexible connection between the valve and weight, all as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK B. HODGSON.
RALPH H. RICKARDS.

Witnesses:
HERMAN BESSETTE,
HARRY E. JILLSON.