L. BLEW-JONES.

STOPPERING DEVICE FOR BOTTLES AND THE LIKE TO PREVENT FRAUDULENT REFILLING.

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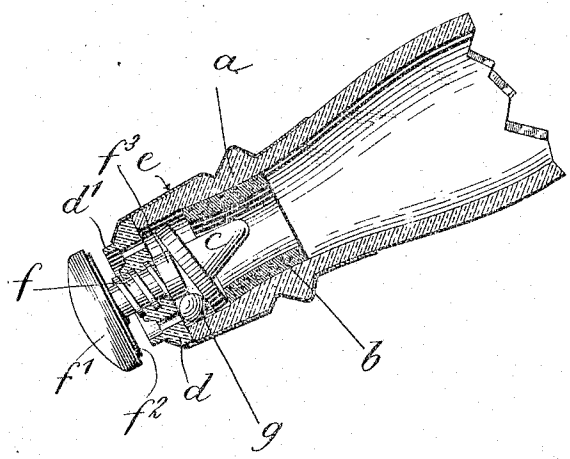
947,052. Patented Jan. 18, 1910.



Witnesses.

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UNITED STATES PATENT OFFICE.

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STOPPERING DEVICE FOR BOTTLES AND THE LIKE TO PREVENT FRAUDULENT REFILLING.

947,052 Specification of Letters Patent. Patented Jan. 18, 1910.

Application filed August 21, 1908. Serial No. 449,660.

To all whom it may concern:

Be it known that I, LAWRENCE BLEW-JONES, a subject of the King of Great Britain and Ireland, residing at Cornhill, in the city of London, England, have invented Improvements Relating to Stoppering Devices for Bottles and the Like to Prevent Fraudulent Refilling, of which the following is a specification.

This invention relates to improvements in bottle stoppering devices and relates especially to that type of stopper in which there is a non-return valve, or similar means, to prevent the fraudulent refilling of bottles.

In the usual form of stoppering devices which are adapted to prevent or render difficult the refilling of bottles or the like, it is found in practice that the valve which prevents the pouring in of liquid from the outside, has a tendency to tilt in such a manner that it will not easily return to its seating, unless the bottle is inclined upward at a certain angle. It being desirable that the valve should return to its seating as quickly as possible to prevent the ingress of liquid, means, such as a ball or other convenient form of stop or impediment, are provided which, when the bottle is tilted in the act of pouring out liquid, falls down and rests against the lower part of the valve in such a way that although the liquid from the inside can press the said valve outward, immediately the liquid from the inside stops flowing, the valve falls back automatically on to its seating.

It is not necessary that the stop should be of any particular form or of any special material, so long as there is a loose piece of metal, earthenware, composition or any other suitable material which is free to move over the opposite face of the valve to that which rests upon the valve seating, such loose piece, by preference, falling to the lower part of the inside of the neck of the bottle in order to act after the manner of a hinge in allowing the valve to fall more readily back upon the seating.

The accompanying drawing illustrates the upper part of the neck of a bottle provided with a stoppering device to prevent fraudulent refilling according to this invention.

a is the bottle neck; *b* a cork seating forced therein; *c* the non-return valve which is shown formed with a stem extending into the seating *c*; *d* a disk or plate resting on the top of the bottle neck; *e* a metal capsule or sleeve which engages with the bead or edge of the disk or plate *d* and securely holds the same in place; *f* a screwed stem extending through the disk or plate *d* and having, at its outer end, a cover plate f^1 with cork lining f^2 and, at its inner end, an enlargement f^3 which, when screwed home bears upon the valve *c* and holds it upon its seat, while the cork lining f^2 of the cover plate makes a tight joint with the rim d^1 of the disk or plate *d*.

g is the loose stop or abutment shown as a ball, which in the act of pouring assumes the position shown so that the valve *c*, instead of moving bodily from its seat, tilts about its lower edge and is thus ready to fall back quickly onto its seat as soon as pouring ceases. As the ball prevents the valve moving bodily, the stem acts as a counterweight and hastens its return to its seat.

For wines, spirits and other liquids of a delicate nature all the parts of the stoppering device in contact with which the liquid is likely to come may be made of porcelain except the valve seat which should then be of cork.

It is to be noted that, in all cases, the relative proportions of the valve, the ball and the space in the bottle neck in which they are located are such that the ball can only touch the valve near its edge and that the ball cannot possibly pass beyond the edge of the valve. The proper coöperation of the ball and valve is thus insured.

What I claim is:—

1. In a bottle stoppering device, the combination of a seating within the bottle neck, a non-return valve adapted to seat thereon, a disk secured upon the bottle mouth and formed with apertures for the escape of liquid and inlet of air, a longitudinally movable but irremovable stem extending through said disk and adapted to make direct contact with said valve when moved inward, and a loose step located between the valve and the disk, substantially as described.

2. In a bottle stoppering device, the combination of a seating within the bottle neck, a non-return valve adapted to seat thereon and provided with a stem extending into the

valve seat, a disk secured upon the bottle mouth and formed with apertures for the escape of liquid and inlet of air, a longitudinally movable but irremovable stem extending through said disk and adapted to make direct contact with said valve when moved inward, and a loose stop located between the valve and the disk, substantially as described.

3. In a bottle stoppering device, the combination of a seating within the bottle neck, a non-return valve adapted to seat thereon, a disk secured upon the bottle mouth and formed with apertures for the escape of liquid and inlet of air, a longitudinally movable but irremovable stem extending through said disk and adapted to make direct contact with said valve when moved inward, a cover plate carried by the outer part of said stem and adapted to make a tight joint with said disk, and a loose ball adapted to check forward movement of the lower part of the valve, substantially as described.

Signed at London England this eleventh day of August 1908.

LAWRENCE BLEW-JONES.

Witnesses:

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T. L. RANDS.