

P. JUPPET.
DEVICE FOR RENDERING BOTTLES NON-REFILLABLE
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Fig: 1.

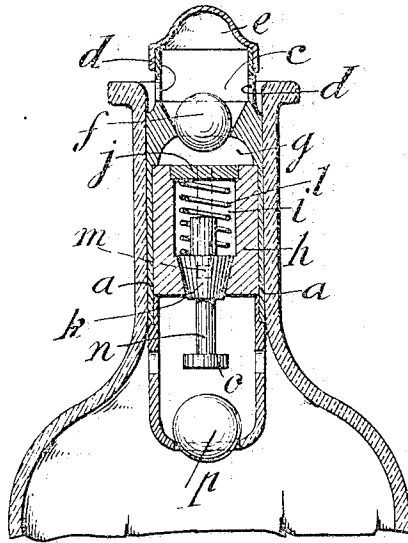


Fig: 2.

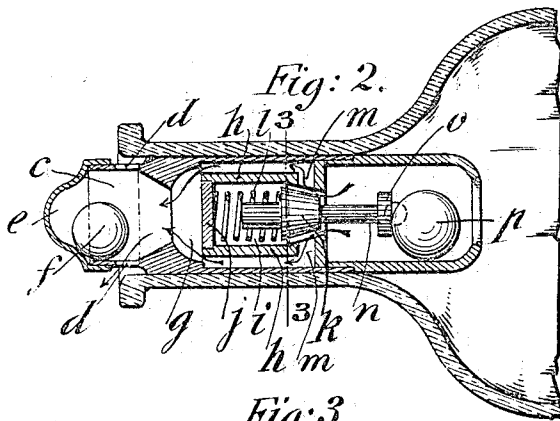
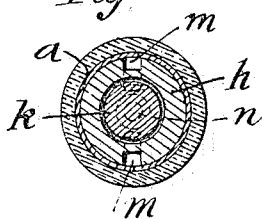


Fig: 3.



Witnesses
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PIERRE JUPPET, OF PARIS, FRANCE.

DEVICE FOR RENDERING BOTTLES NON-REFILLABLE.

No. 809,811.

Specification of Letters Patent.

Patented Jan. 9, 1906.

Application filed April 15, 1905. Serial No. 255,679.

To all whom it may concern:

Be it known that I, PIERRE JUPPET, a citizen of the Republic of France, and a resident of Paris, France, have invented new and useful Improvements in Devices for Rendering Bottles Non-Refillable, which improvements are fully set forth in the following specification.

For a long time past the attention of inventors has been attracted to the desirability of inventing an appliance or form of stopper readily adaptable to the neck of bottles when these latter are full, the said device being adapted to permit of pouring the liquid from the bottle, while preventing it from being refilled unless the device is previously removed. Although at first sight this problem would appear to be incapable of solution, numerous inventors have attempted it. Hitherto, however, none of these attempts have furnished a solution, and no such device is found in commercial use notwithstanding the large amount of interest in the question. In examining all the systems hitherto proposed it will be seen that inventors have directed their attention to providing means for preventing liquid from being introduced into bottles by ordinary means, losing sight of the fact that persons having a fraudulent object—that is to say, persons having an interest in introducing a liquid into a bottle other than that which it originally contained—exercise a large amount of ingenuity in order to attain their object. What is required, therefore, is a device capable of defeating any means which can be devised. In order that this may be the case, in the first place it is necessary that the device should only permit the liquid to flow out when the bottle is vertical, or approximately so, mouth lowermost, and that the device should again close when the bottle assumes a horizontal position. All these conditions for rendering bottles non-refillable are obtained in the device which forms the subject of the present invention.

The device is introduced into the neck of the bottle when this latter has been filled. When the bottle is empty, the device may be removed and adapted to another bottle.

In the accompanying drawings, in which the same parts are denoted by the same reference characters throughout the several views, Figure 1 is a vertical central section through a bottle equipped with the improved device, showing said bottle in normal or upright position. Fig. 2 is a similar section

showing the bottle in tilted position for pouring off the liquid, and Fig. 3 is a section on line 3 3 of Fig. 2.

Referring to the drawings, it will be seen that the device or attachment is constituted by a cylindrical casing or tube *a*, which contains every part of the mechanism and is adapted to be introduced into and held in position in the neck of the bottle, as shown. At the upper portion of the casing *a* is a chamber *c*, the side walls of which are provided with lateral openings *d*, while a cap *e* serves as a covering for the chamber. Within the chamber *c* is arranged a float *f*, illustrated as a ball of some light material, which cooperates with a seat disposed slightly below the side walls of the chamber *c*.

Arranged within and intermediately of the height of the casing *a* is a cup-shaped member or core *h*, which is provided in its bottom with a conical valve-seat, with which communicate a number of passages *m*, extending laterally from said valve-seat and thence upwardly at the sides of the cup *h* to a chamber *g*, arranged above said cup, but below the float *f*. This chamber is so shaped as to constitute a collector for the liquid before the same issues through the opening controlled by the float. A conical valve *k* cooperates with the valve-seat in the lower part of the cup *h* and is normally held in closed position by means of a helical spring *l*, disposed in said cup and abutting at its upper end against a disk *j*, which hermetically closes said cup. At its lower end the spring *l* abuts against the upper larger face of the conical valve *k* and embraces a cylindrical stud or pin extending upwardly therefrom. Depending from the valve *k* is a stem *n*, carrying at its lower end a small disk *o*. The lower portion of the casing *a* is bent inwardly in such a manner as to retain against displacement from within the same a comparatively large and heavy ball *p*, which is freely movable in the lower part of the casing between the disk *o* and the extreme lower end of the casing. Inlet-openings for the liquid are arranged in the sides of the casing approximately in horizontal alinement with the disk *o*, as shown.

The operation of the improved device is as follows: After the bottle has been filled with the liquid which it is to contain the improved attachment is introduced into the neck and seated there in any approved manner. When it is desired to pour out the liquid, the bottle is tilted in the usual manner and the heavy

ball *p* bears by gravity against the disk *o* of the valve-stem, as shown in Fig. 2, and forces the valve *k* away from its seat against the tension of the spring *l*. The liquid which has entered into the lower part of the casing through the lower opening and the side openings in the same passes then to the cup *h* and through the passages *m* at the sides of the same upwardly to the collecting-chamber *g*, through the float-seat adjacent said chamber, the float *f* being free of its seat outwardly through the openings *d* in the chamber *c*, and thence through the orifice in the cap *b*. When the bottle is again placed in upright position, the ball *p* returns to its normal position and releases the valve *k*, which returns to its seat under the action of its spring. The float *f* effectually prevents any attempt to introduce liquid into the bottle when the latter is in inverted position. It is manifest that said float will be carried upwardly against its seat and cut off communication with the interior of the bottle. By the arrangement of the passages *m* at the sides of the casing a check upon any attempt to fill the bottle by pressure or suction is obtained, inasmuch as the pressure or suction force would operate at substantially right angles to the axis of the valve *k*, as will be understood.

The device may be made either of glass, porcelain, ebonite, wood, or inoxidizable metals or materials which are not incompat-

ible with the nature of the liquid to be protected.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a device for preventing the refilling of bottles, the combination of a casing, a member arranged in said casing and having a valve-seat in the bottom thereof, there being passages extending laterally from said valve-seat and upwardly at the sides of said member, a valve coöperating with said valve-seat, and means carried by the casing for unseating said valve when the bottle is tilted.

2. In a device such as described, the combination, with a casing, of a cup-shaped member arranged therein and provided in its bottom with a valve-seat, there being passages leading laterally from said valve-seat and upwardly at the sides of said member, a valve coöperating with said valve-seat, a member covering said cup, a spring interposed between said covering member and said valve, and gravity-actuated means for unseating said valve against the tension of said spring.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PIERRE JUPPET

Witnesses:

JULES TOUSSET,
FRANCIS CLÉROIE.