

No. 756,843.

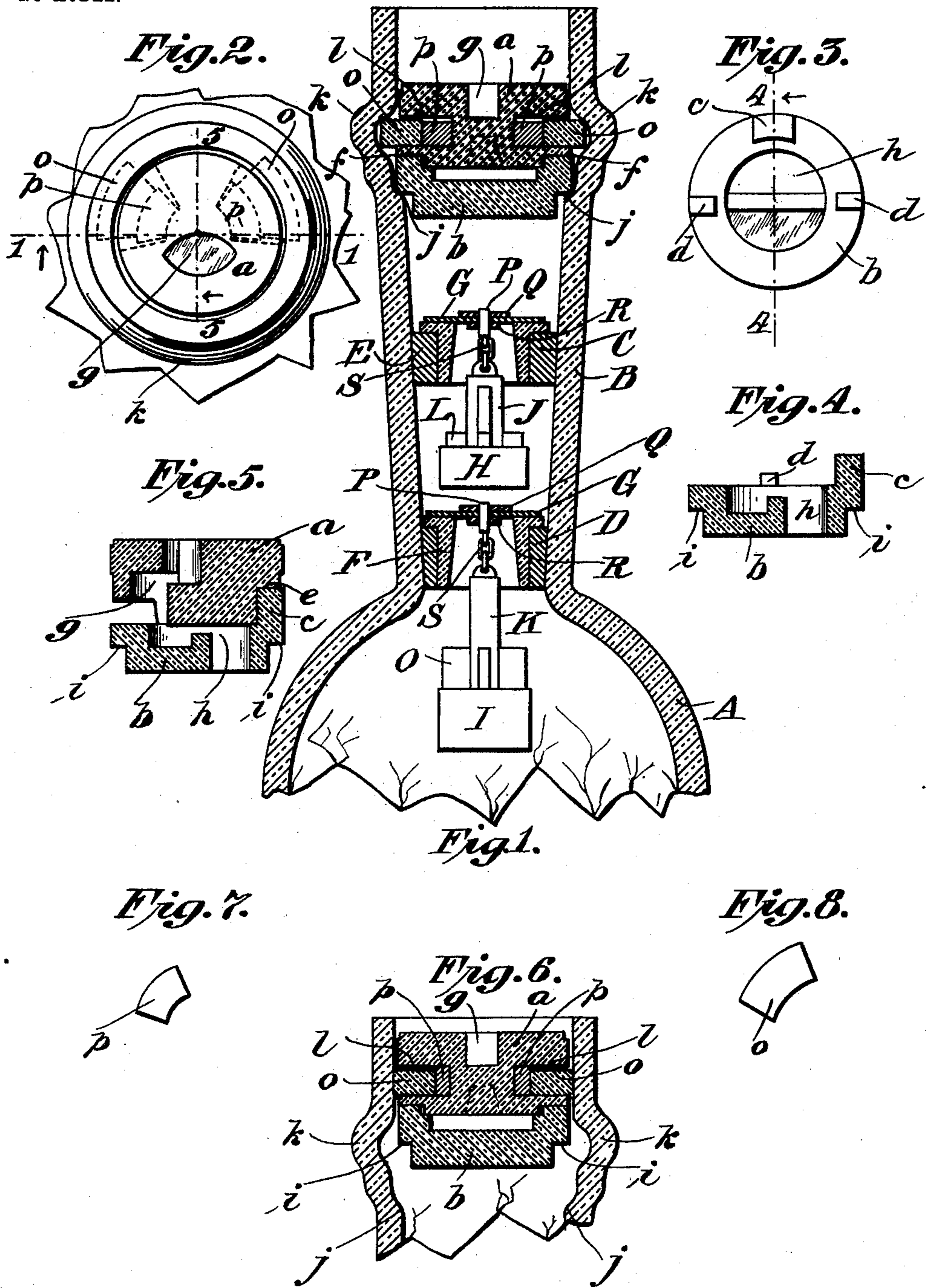
PATENTED APR. 12, 1904.

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NON-REFILLABLE BOTTLE.

APPLICATION FILED JULY 18, 1903.

NO MODEL.



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UNITED STATES PATENT OFFICE.

SAMUEL E. GEORGE AND JOSEPH R. NORRIS, OF NEW YORK, N. Y.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 756,843, dated April 12, 1904.

Application filed July 18, 1903. Serial No. 166,142. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL E. GEORGE and JOSEPH R. NORRIS, citizens of the United States, and residents of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, accompanied by drawings.

10 This invention relates to non-refillable bottles, but more particularly to a guard for a bottle to prevent interference with the valves inside of the bottle; and the objects of the invention are to improve upon such guards, 15 simplify their construction, and increase their efficiency of operation.

Further objects of the invention will hereinafter appear.

To these ends the invention consists of a 20 guard for carrying out the above objects embodying the features of construction, combinations of elements, and arrangement of parts having the general mode of operation substantially as hereinafter fully described, and 25 claimed in this specification and shown in the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a portion of a bottle and the neck thereof, showing suitable valves for non-refillable bottles 30 and the guard inserted in the mouth of the bottle. Fig. 2 is a top plan view of the bottle and guard looking down upon the mouth of the bottle. Fig. 3 is a top plan view of the lower half of the guard. Fig. 4 is a transverse vertical sectional view of the lower half 35 of the guard on the line 4 4 of Fig. 3. Fig. 5 is a transverse vertical sectional view taken through both halves of the guard on the line 5 5 of Fig. 2. Fig. 6 is a transverse vertical sectional view of the guard, taken on the line 1 1 of Fig. 2, being a view like that shown in Fig. 1 with the exception that the guard is shown about to be thrust within the neck of the bottle and seated in its final position. In Fig. 40 1 the guard is shown in its final position. Fig. 7 is a detail view of one of the elastic locking-pieces, and Fig. 8 is a detail view of one of the locking-keys.

Referring more particularly to the drawings, A represents a portion of a bottle hav-

ing a neck B. Within the neck are the corks C and D, having apertures therein, in which are inserted the annular flanged glass rings E and F. Upon the top of each glass ring is a valve G, which is preferably of mica, and to 55 the valves are hung suitable weights H and I. Each weight has a neck J and K, and projections L and O are formed upon the weights in such manner that when the bottle is inverted the liquid may run out in and around the pro- 60 jections O and L. A plug P is inserted through each valve G and secured therein by stops Q and R. Between the plugs P and the weights are shown the links of chains S.

We have described a non-refillable bottle 65 provided with two valves such as described and claimed in our copending application, Serial No. 155,118, filed May 1, 1903, and we do not herein claim anything disclosed in that appli- 70 cation. We have chosen to illustrate a bottle having valves like our former application; but it is to be understood that any suitable valves may be provided or any other suitable arrangement to prevent the bottle from being 75 refilled when it has once been emptied. This portion of the drawings is merely illustrative of a suitable bottle.

Referring to the guard for the bottle, it will be seen to comprise two parts, the upper part 80 *a* and the lower part *b*. These two parts are preferably formed of glass, although they may be made of any other suitable material desired, and one part is provided with projections on its surface which are adapted to register with apertures or recesses in the other 85 part to lock the two together and prevent one from being turned without moving the other. In this instance the lower part *b* is provided with the projections *c* and *d*, while the upper part *a* is provided with apertures *e* and *f* to 90 receive the projections *c* and *d*. The larger projection *c* enters the larger aperture *e*, while the smaller projection *d* enters the smaller aperture *f*.

When the two parts *a* and *b* of the guard are 95 brought together, as illustrated in Figs. 1, 5, and 6, a tortuous passage will be formed through them, as illustrated in Fig. 5. This passage is formed by the opening *g* in the up- 100 per part *a* and by the opening *h* in the lower

part *b*. The tortuous passage *g h* affords provision for the passage of the liquid from the inside of the bottle, but prevents the insertion of wires or other devices for interference with the valves.

The lower part *b* of the guard is provided with shoulders *i*, adapted to seat upon the projecting edge *j* within the bottle, and the neck of the bottle is also provided with a fillet *k* for the reception of suitable devices for locking the guard in position. One of our improvements relates also to the locking means for the guard, as shown, the sides of the upper part *a* of the guard being provided with recesses *l*, as shown in Figs. 1 and 6, within which recesses the keys *o* and elastic locking-pieces *p* are adapted to rest. When the guard is to be inserted in the bottle, the elastic pieces *p* are first inserted in the apertures or recesses *l* in the upper part *a* of the guard, and then the locking-keys, which may be of glass or other suitable hard material, are inserted in the apertures *l*. The pressure between the keys *o* and the side of the bottle compresses the elastic locking-pieces *p*, as shown in Fig. 6, when the guard is to be inserted in the neck of the bottle, and the guard may be pressed down until the shoulders *i* of the lower part *b* rest upon the rib or projection *j* in the neck of the bottle. When the guard is seated in its final position, the elastic locking-pieces *p* may expand and press the keys *o* outwardly into the

fillets *k*. When the elastic locking-pieces *p* have thus expanded and forced the keys outwardly, it is obvious that the guard cannot be removed without breaking the neck of the bottle. The elastic locking-pieces may be of any suitable material, such as cork or rubber.

Obviously some features of this invention may be used without others, and the invention may be embodied in widely-varying forms.

Therefore, without limiting the invention to the construction shown and described and without enumerating equivalents, we claim, and desire to obtain by Letters Patent, the following:

The combination with the neck of a bottle, of a fillet upon said neck, and a shoulder beneath said fillet, a two-part guard having tortuous passages therethrough, the lower part resting upon said shoulder and the upper part having recesses in its sides, locking-keys arranged in said recesses and adapted to enter the fillet on the neck, and elastic locking-pieces behind the keys for pressing them outward, for substantially the purposes set forth.

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

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Witnesses:

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