(No Model.)

B. W. NORTON.

DEVICE FOR PREVENTING FRAUDULENT FILLING OF BOTTLES.

No. 603,151. Patented Apr. 26, 1898.

Fig. 1

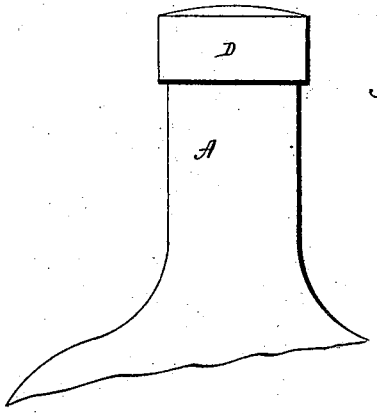


Fig. 2

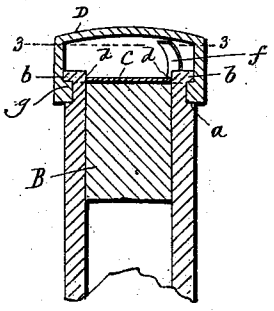


Fig. 4

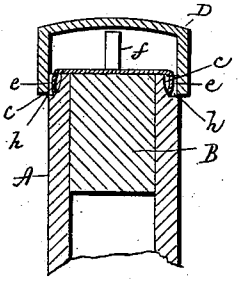


Fig. 3

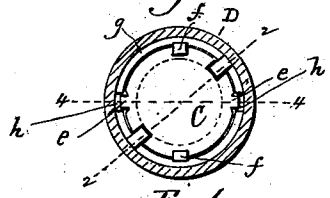


Fig. 5

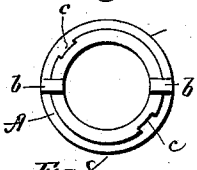


Fig. 7

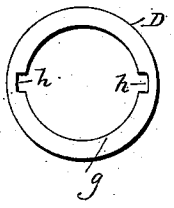


Fig. 8

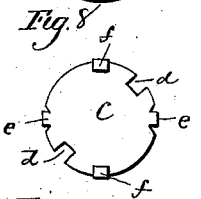


Fig. 6

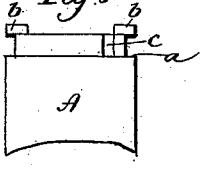


Fig. 9

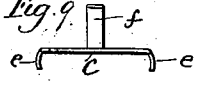


Fig. 10.

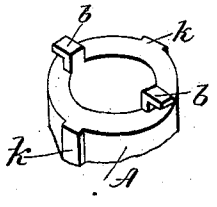


Fig. 11.

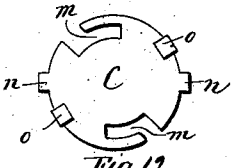


Fig. 12

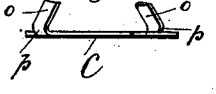


Fig. 13.

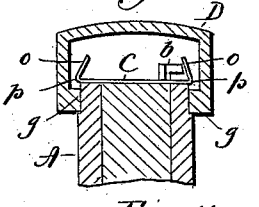
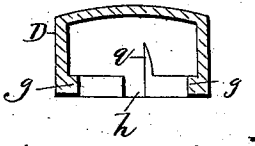


Fig 14



Witnesses.
J. F. Shumway.
Lillian D. Kelsey.

Bernard W. Norton.
Inventor.
By Atty's Earle & Seymour

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

BERNARD W. NORTON, OF MERIDEN, CONNECTICUT.

DEVICE FOR PREVENTING FRAUDULENT FILLING OF BOTTLES.

SPECIFICATION forming part of Letters Patent No. 603,151, dated April 26, 1898.

Application filed August 4, 1897. Serial No. 647,126. (No model.)

To all whom it may concern:

Be it known that I, BERNARD W. NORTON, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Devices for Preventing the Fraudulent Filling of Bottles; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the neck of a bottle with the closing-cap applied thereto; Fig. 2, a vertical section thereof; Fig. 3, a sectional view on line 3 3 of Fig. 2; Fig. 4, a sectional view on line 4 4 of Fig. 3; Fig. 5, a top view of the neck of a bottle; Fig. 6, a side view of the neck of the bottle; Fig. 7, an under side view of the cap detached; Fig. 8, a plan view of the disk detached; Fig. 9, a side view of the same; Fig. 10, a perspective view of the upper end of the neck of a bottle, illustrating the modification; Fig. 11, a plan view of a disk adapted for engagement therewith; Fig. 12, a side view of the same; Fig. 13, a sectional view illustrating the engagement of the parts as described in the modification, and Fig. 14 a sectional view of the cap shown in Fig. 13 detached.

This invention relates to an improvement in devices for preventing the fraudulent filling or refilling of bottles, the object being a simple construction in which the bottle may be corked in the usual manner and which when opened in no wise interferes with the discharge of the contents of the bottle, but which in opening so mutilates the locking device as to prevent its second use; and it consists in the construction as hereinafter described, and particularly recited in the claims.

In carrying out my invention various forms may be employed, but preferably the upper edge of the neck A of the bottle will be reduced to form a shoulder *a*, and from the upper edge of the neck on opposite sides will extend lugs *b*, formed integral with the neck. In the sides of the neck adjacent to the said lugs are notches *c*. The bottle is closed by a cork B in the usual manner, the upper end of the said cork being forced flush with or below the upper end of the neck. Over the upper end of the neck is placed a disk C, which is formed with notches *d*, which clear the lugs *b*. It is also formed with downwardly-extending fingers *e*, which are adapted to enter the notches *c*. These fingers have more or less spring and normally project outward over the shoulder *a*. The disk is also formed with upwardly-extending arms *f*. The locking device consists of a cap D, closed at its upper end and formed at its lower edge with an inwardly-turned flange *g*, leaving an opening corresponding in diameter to the external diameter of the upper end of the neck, and so that when passed over the neck it will rest upon the shoulder *a*. In opposite sides of the flanges are notches *h*, into which the lugs *b* extend when the cap is set over the upper end of the neck. When the cap is thus set over the neck and rests upon the shoulder *a*, the upper edge of the flange *g* will pass beneath the ends of the lugs *b*, so that the cap may be rotated upon the shoulder. When thus in place, the cap is rotated either to the right or left, and so that the flange passes beneath the lugs until the notches *h* register with the spring-fingers *e*, which then snap into the notches and so as to prevent further rotation of the cap, the disk being held down upon the top of the neck by the engagement of the arms *f* with the inner surface of the cap. When thus engaged, the spring-fingers *e* prevent the rotation of the cap D, and the engagement of the lugs with the flange *g* prevent the upward movement of the cap, which can only be removed by a force sufficient to break the said lugs, which, when broken, permit the ready removal of the cap and disk and so as to allow the cork to be drawn in the usual manner. The lugs having thus been broken prevent the application of another cap, and hence at once indicates that the bottle has been opened.

Instead of forming the neck of the bottle with the shoulder and notches *c*, before mentioned, the neck may be provided on opposite sides with ribs *k* and the disk with bayonet-slots *m*, into which the lugs *b* may extend, and with outwardly-extending fingers *n*, which will register with the ribs *k* when the disk is interlocked with the lugs *b*. The disk is also constructed with upwardly-extending spring-arms *o*, formed with shoulders *p*, which

will snap over the flange g of the cap when the cap is set over the upper end of the neck. In this construction the ribs k and fingers n prevent the rotation of the cap, and the shoulders p, engaging with the flange, prevent the upward movement of the cap as the said disk is held downward by its engagement with the lugs b and as in the previous constructions necessitates that the said lugs be broken before the cap may be removed. To prevent the rotation of the disk within the cap, a shoulder q is formed above the flange at one side of one of the notches h.

It will thus be seen that the bottle may be corked or uncorked in the usual manner and avoid the contact of the contents with metal, as is unavoidably necessary in many of the devices for this purpose, and that the device may be readily applied without special mechanism and when opened in no wise interferes with the delivery of the contents of the bottle, but is an absolutely safe protection against the reuse of the bottle.

Another advantage of this construction is that a distinguishing name or mark may be stamped or applied to the upper face of the disk or to the inner face of the cap, so as to be exposed through the cap, such distinguishing mark thereby being protected against removal.

It is apparent without further description or illustration that instead of forming the frangible lugs upon the neck of the bottle they may be formed upon the cap and the interlocking groove upon the neck of the bottle.

It will be understood from the foregoing that I do not wish to limit my invention to either of the forms shown and described; but

What I do claim, and desire to secure by Letters Patent, is—

1. The combination with the neck of a bottle formed with integral lugs projecting beyond its upper end, of a disk adapted to be set over the upper end of said neck, and formed with clearance-notches for said lugs, whereby said disk is held against rotation, said disk also formed with locking-fingers, and the cap also adapted to be set over the upper end of the said neck and interlocked with said cap through the instrumentality of said disk, substantially as described.

2. The combination with the neck of a bottle, of a cap adapted to be set over the upper end of said neck, one of said parts formed with frangible lugs and the other with grooves to receive them, of a disk also adapted to be set over the upper end of said neck upon which it is held against rotation, said disk formed with fingers for engagement with said cap, whereby the cap and neck are interlocked, substantially as described.

3. The combination with the neck of a bottle formed at its upper end with integral lugs, an external shoulder below the upper end of said neck, and notches in the sides of the neck above said shoulder, of a disk corresponding in diameter to the diameter of the upper end of said neck, and formed with notches, downwardly-turned fingers and upwardly-turned arms, and a cap adapted to be set over the upper end of said neck and formed at its lower edge with an inwardly-turned flange, in the opposite sides of which are notches, whereby the said cap may be interlocked with said neck through the instrumentality of said disk, substantially as described.

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

BERNARD W. NORTON.

Witnesses:
HENRY DRYHURST,
ARTHUR H. GARDNER.