(No Model.)

# E. N. GILFILLAN.

## BOTTLE STOPPER.

No. 581,153. Patented Apr. 20, 1897.

Fig. 1.

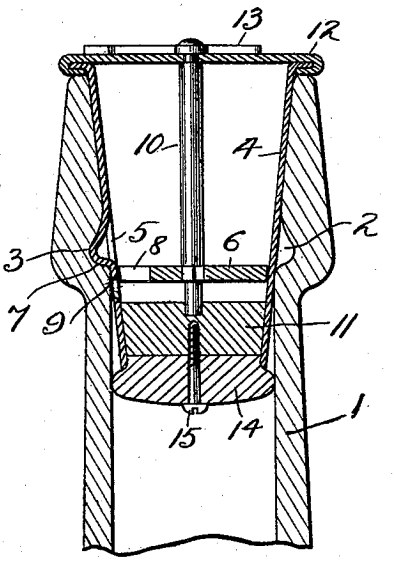



Fig. 2.

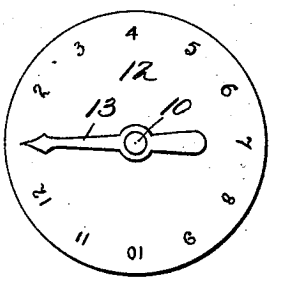



Fig. 3.

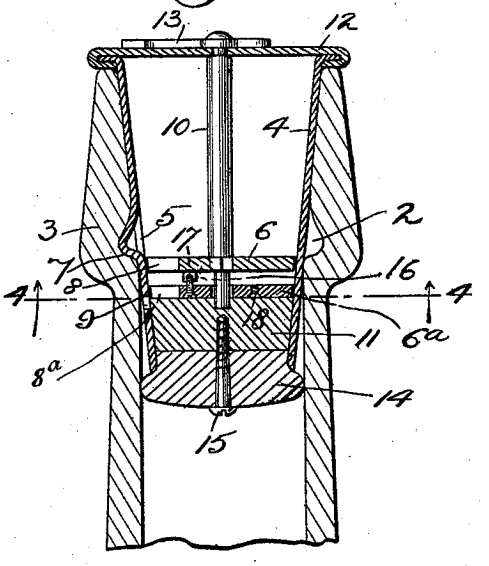
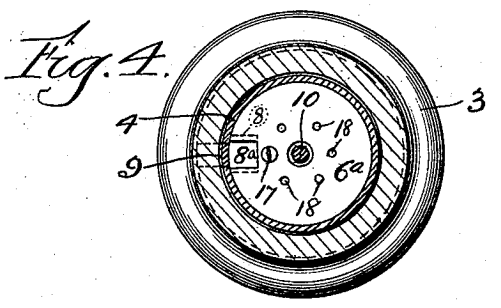



Fig. 4.

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# UNITED STATES PATENT OFFICE.

ESSINGTON N. GILFILLAN, OF CHICAGO, ILLINOIS.

## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 581,153, dated April 20, 1897.

Application filed April 18, 1896. Serial No. 588,060. (No model.)

*To all whom it may concern:*

Be it known that I, ESSINGTON N. GILFILLAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a full, clear, and exact specification.

My invention relates to improvements in bottle-stoppers, whereby the stopper may be secured against withdrawal; and it has for its primary object to provide a stopper with simple means for removably locking it in place, so as to prevent unauthorized persons from molesting the contents of the bottle.

A further object of my invention is to provide a bottle-stopper with a simple permutation-lock for preventing it from being drawn and capable of having its combination readily altered.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts, whereby the said objects and certain other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawings and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a vertical sectional view of the neck of a bottle and my improved stopper therein. Fig. 2 is a plan view of the cap-plate of the stopper. Fig. 3 is a vertical detail sectional view of a portion of my improved stopper, illustrating a modification hereinafter described; and Fig. 4 is a plan section taken on the line 4 4, Fig. 3.

In carrying out my invention I provide the neck 1 of the bottle with an internal notch or circumferential groove 2, in which engages a catch or lug 3 on the stopper. This stopper is preferably composed of a shell-like body 4, most conveniently made of thin metal, and the catch 3 may be conveniently formed by striking up a tongue from the side of the stopper 4, thus at once imparting to the lug the desired degree of flexibilty and providing it with firm attachment to the stopper in addition to forming a passage 5 through the shell 4, into which the lug is deflected to permit the stopper to be withdrawn. In order, however, that the lug 3 may not be thus deflected excepting when the lock has been properly set, I arrange within the shell 4 a disk 6, whose edge is located opposite an inturned end 7 of the lug 3 and prevents the lug from receding into the shell 4 until a notch 8 in the periphery of the disk has been turned to a position opposite, so as to receive the end of the lug 3. When the disk 6 is thus set, the lug is crowded into the shell by the action of drawing the stopper, and it is likewise deflected when the stopper is inserted, the upper and lower sides of the lug or catch being rounded or beveled, as shown, to produce these movements, and the lower extremity thereof being downturned, as shown at 9, to insure its firm engagement with the edge of the disk 6.

The disk 6 may be manipulated by a stem or shaft 10, upon which the disk is secured and which is stepped at its lower end in a cross-bar or block 11, while its upper end passes through a cap-plate 12 and is provided above the latter with an index hand or pointer 13, which points to the numbers or characters indicated on the surface of the plate 12 and by which the position of the notch 8 is determined, the cap-plate 12 being firmly secured to or formed on the shell 4.

The shell 4 may be cylindrical, but it is preferably slightly conical, so as to better fit the neck of the bottle, and the lower end of the interior is also conical for the further purpose of aiding in securing the block 11 in place without special attachment. As shown in the drawings, the block 11 snugly fits the interior of the shell and is too long or wide to be pulled through the lower end thereof, and in the lower end of the shell is arranged the reduced portion of a cork 14, which is held in place by a screw 15 engaging in the block 11, and thus while holding the cork in place also secures the block against upward movement by virtue of the enlarged protruding end of the cork 14, whose purpose is to prevent the escape of the contents of the bottle.

In Figs. 3 and 4 I have shown two of the notched disks or tumblers, the lower one $6^a$ being independent of the stem 10 and being moved only by a pin 16 on the bottom of the disk 6 engaging with a pin 17 on top of the disk $6^a$. In order that the movement of the shaft 10 may not be communicated to the disk $6^a$, the latter is arranged upon the block 11 and is held concentric with the shaft 10, but

out of contact, by the sides of the shell 4. The pin 17 is in the form of a screw and may be placed in any one of the series of holes 18, according to the combination desired, by first removing the cork 14, whereby the holes 18 will be accessible at the sides of the block or cross-bar 11. In order to uncork the bottle, it will be understood that both notches in the disks 6 $6^a$ must be brought opposite the projection 9.

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

1. The combination with a bottle having a groove formed around the inner side of its neck, of a stopper having a body portion provided with an opening in the side thereof, a deflectible tongue having a latch arranged in said opening and adapted to engage in said groove or to be depressed into the opening in said body portion, a rotary stem journaled in said body portion, a disk mounted on said stem and having its periphery arranged to engage with said latch and hold it into engagement with said groove in the neck and a notch adapted to receive said latch for permitting the latter to disengage with said groove, substantially as set forth.

2. The combination with a bottle having a groove around the inner side of its neck, of a shell having a vertical slot formed in the side thereof, a deflectible tongue arranged in said slot and having a beveled latch adapted to engage in said groove or to be depressed into said shell through said slot, a block in the bottom of said shell, a stem journaled in said block and the top of said shell and having a pointer on the outer end thereof, a notched disk on said stem in said shell adapted to engage with said latch, and a cork secured to the bottom of said block, substantially as set forth.

3. The combination of a bottle having a notch in the neck or opening thereof, a stopper having a spring-catch engaging in said notch, a rotary disk having a notch located in said stopper opposite said spring-catch and adapted to resist the inward movement thereof, and a stem projecting through the top of said stopper and being provided with an index or pointer, substantially as set forth.

4. The combination of a bottle having a notch in its neck, a shell having a spring tongue or catch engaging in said notch and adapted to be crowded into said shell, a rotary disk located opposite said catch, means for rotating said disk, the cross-bar 11 in said shell and a cork secured to said cross-bar under the end of said shell, substantially as set forth.

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