

P. J. KNIGHT.
BOTTLE STOPPERING.
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1,025,811.

Patented May 7, 1912.

FIG. 1.

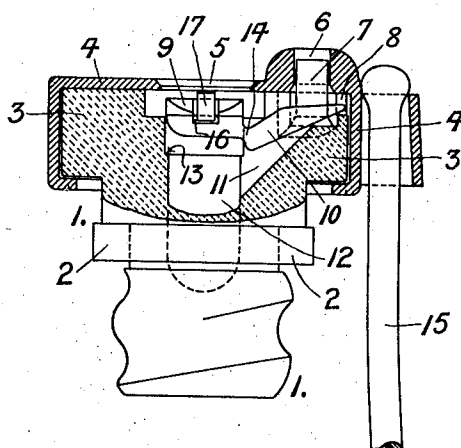
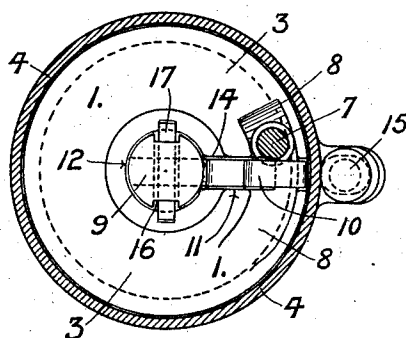


FIG. 2.



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BOTTLE-STOPPERING.

1,025,811.

Specification of Letters Patent.

Patented May 7, 1912.

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To all whom it may concern:

Be it known that I, PERCY JOHN KNIGHT, a subject of the King of England, residing at Liverpool, in the county of Lancaster, England, have invented certain new and useful Improvements Connected with Bottle-Stopperings, of which the following is a specification.

This invention has reference to stoppering bottles, and more particularly to that kind in which the stopper proper, is of the "screw" type; and it has primarily for its object, to provide improvements in connection with stoppers of this kind, by which the bottle in, or in connection with which they are used, cannot, when empty, be refilled and reclosed or stoppered by the retailer of the liquid contents of the bottle, or the holder of the bottle, (unless specially authorized or licensed so to do), and can only be re-stoppered, after re-filling, by the maker or general supplier of the liquid goods. The general object of preventing this re-stoppering being done, is to prevent bottles bearing a label, or a distinguishing mark of a maker or supplier of a certain character or quality of liquid goods, being refilled with liquid of another maker or supplier, and re-stoppered and sold, as the liquid of the maker or supplier named on, or known by the said label or distinguishing mark.

In the following description, the improvements connected with bottle stopperings according to this invention, are comprised; and in the accompanying drawings they are illustrated, and in connection with these drawings, the description is made.

Figure 1 is a sectional elevation of the stopperings; and Fig. 2 is a plan in section.

The stopper proper 1 shown in the drawing, is of the usual screw or threaded type, having a rubber or like ring or washer 2 on it, for making a fluid tight joint between the body of the stopper, and the mouth of the bottle.

The head 3 of the stopper is inclosed or held within an outer cap 4, which is preferably of metal, and the inner edge of which comes under the shoulder on the inside of

the stopper head 3, and holds the cap on the stopper head. The cap has a central hole 5 in it, for the purpose hereinafter explained; and it also has a small hole 6 in it at a point between its center and the periphery, within which fits a pin 7, which is free to move up and down it, in a direction parallel with the axis of the cap and stopper, and is guided and kept in this parallel position by the material of the cap surrounding the hole.

The head 3 of this stopper proper has in the upper or outer surface of it, a groove 8, the bottom of which forms an inclined plane, inclining down gradually from the upper surface of the head 3, to its termination, which of course is the deepest point; and over and in connection with this inclined plane and groove 8, the head of the pin 7 of the cap 4 works; and the groove and the plane are so arranged, that when the cap 4 is turned in the direction in which the stopper screws out of the bottle, the pin 7 will move down the inclined bottom of this groove, and come in contact with the material at the end of the groove, and so engage the stopper, and turn it and unscrew it. On the other hand, if the cap 4 be turned in the opposite direction, the pin 7 simply slides up the inclined bottom of the groove 8, after having dropped into it, and so revolves idly over the stopper head, that is without turning it or affecting it.

The mode of or means for turning the stopper 1 so as to screw it in, and stopper the bottle, after refilling, consists in the employment of a "scotch" device adapted to be introduced into the path of the cap pin 7, when moved up in the screwing up direction, so that when the cap is turned in this direction, the cap pin comes against the "scotch", which will be held by the stopper head; and through its intervention, the stopper is turned and screwed into the bottle, after the bottle has been re-filled. This "scotch" device, in the case shown, consists of two parts, namely, a central part or head 9, and a radial projecting or tongue part 10, the underside of which is

inclined as shown; and the device is introduced through the hole 5 of the cap 4, the point of the projecting or tongue part 10 being passed into a radial slot 11, leading out of a central hole 12 in the head or body of the stopper 1, the bottom of which radial slot is inclined. The central part or head 9 has an aperture 16 through it, through which is passed a spring 17, the ends of which are bowed upward, and project above the head, and beyond its periphery, the extremities lying, when in place, underneath the edge of the metal of the cap 4 surrounding the hole 5, beneath which the material of the head 3 is removed, forming an annular recess. The object and effect of the spring is to prevent the "scotch" being removed from the stopper by unauthorized persons.

The "scotch" device will be only supplied or legitimately used by those authorized or properly entitled to fill the bottles; and as stated, after filling the bottle, the "scotch" is introduced into position, as shown in Fig. 1, and its outer end passes into the radial groove leading from the hole 12 in the stopper body, and into a position in front of the pin 7, across the groove 8; while its head 9 will lie within the center hole of the cap.

After use in the manner described, the head 9 of the "scotch" device is broken off by pressing it downward into the hole 12; and when broken it may lodge on a ledge 13 in the hole, which will be made of just sufficient size to make the head 9 a "nice fit" within the upper portion of it; or in other words, it fills it. The engaging end or tongue portion 10 of the "scotch" slides, when broken off, down the inclined radial groove 11, toward the center of the stopper, and falls into the hole 12, under the lower edge of the cap 9, resting on ledge 13. In this condition, that is with the "scotch" out of the way, the stopper 1 cannot be screwed in; and until and unless a new "scotch" device is available, the bottle after being emptied, cannot be re-stoppered after refilling.

The "scotch" device head 9, may, at the part 14, where the tongue joins it, be of reduced or weak section, by which when the head is pressed down in the manner described, it will readily break away from the tongue portion 10. Also, in some cases, the head of "scotch" device may have a cut or slot across the center, at the upper surface, similar to that in a wood screw, to enable it to be readily broken.

The "scotch" device may be made of any suitable material, such as pottery or equivalent material, or one of the weaker metals or alloys, or the like.

A rod 15, on which the cap is slidable and rotatable, may be used and secured to the

bottle neck, or body, as may be convenient or desirable; or the cap may be held or secured to the bottle in any other suitable way.

The invention may be further applied to existing stoppers of the screw type, as well as to new ones, and when applied to the former, they only require the grooves 8 and 11 of the hole 12 to be cut or formed in them.

What is claimed is:—

1. In a bottle stopper, the combination of a threaded body 1; a cap or device connected with the part of the said body which comes outside the bottle, and adapted to be rotated in relation to same; and a vertically movable means in said cap, adapted to move into engagement with a part of the said stopper body, when rotated in one direction, but inoperative upon same, when moved in the other direction; substantially as described.

2. In a bottle stopper, the combination of a threaded body 1; a cap or device connected with the part of the said body, which comes outside the bottle, and adapted to be rotated in relation to same; a vertically movable means in said cap, adapted to move into engagement with a part of the said stopper body, when rotated in one direction, but inoperative upon same when moved in the other direction; and a "scotching" device adapted to be introduced to the side of the said vertical movable means away from the part of the stopper which said vertical movable means engages when moved in one direction, whereby said stopper body is rotated when the cap or like device is revolved in the opposite direction; substantially as described.

3. In a bottle stopper, the combination of a threaded body 1; a cap or device 4, fitting over the head of the stopper body, and engaging same, and adapted to be rotated in relation to same; an inclined groove, as 8, in the upper surface of the stopper body; a pin 7 movable vertically in the cap 4, and adapted to operate in a groove; a central hole in the cap, and the stopper body, respectively; and a gap or way extending between the hole in the stopper body, and the groove 8; substantially as set forth.

4. In a bottle stopper, the combination of the body 1; cap 4 rotatable thereon, having a central aperture 5; a pin 7 working vertically in and carried by the cap; and a "scotching" device adapted to be inserted into the cap and the stopper body, and having an outer end 10, adapted to stand across the path of the lower end of the pin 7, in relation to its rotation, when the cap is turned; substantially as set forth.

5. In a bottle stopper, the combination of the stopper body 1; a cap 4; a pin 7 vertically movable in the cap; and a "scotch-

ing" device consisting of a head 9 adapted
to stand in a central position in the stopper,
and a radial tongue part 10 projecting out
from same; the head part 9 of the "scotch-
5 ing" device being adapted to be readily
broken from the tongue part 10; substan-
tially as set forth.

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

PERCY J. KNIGHT.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
