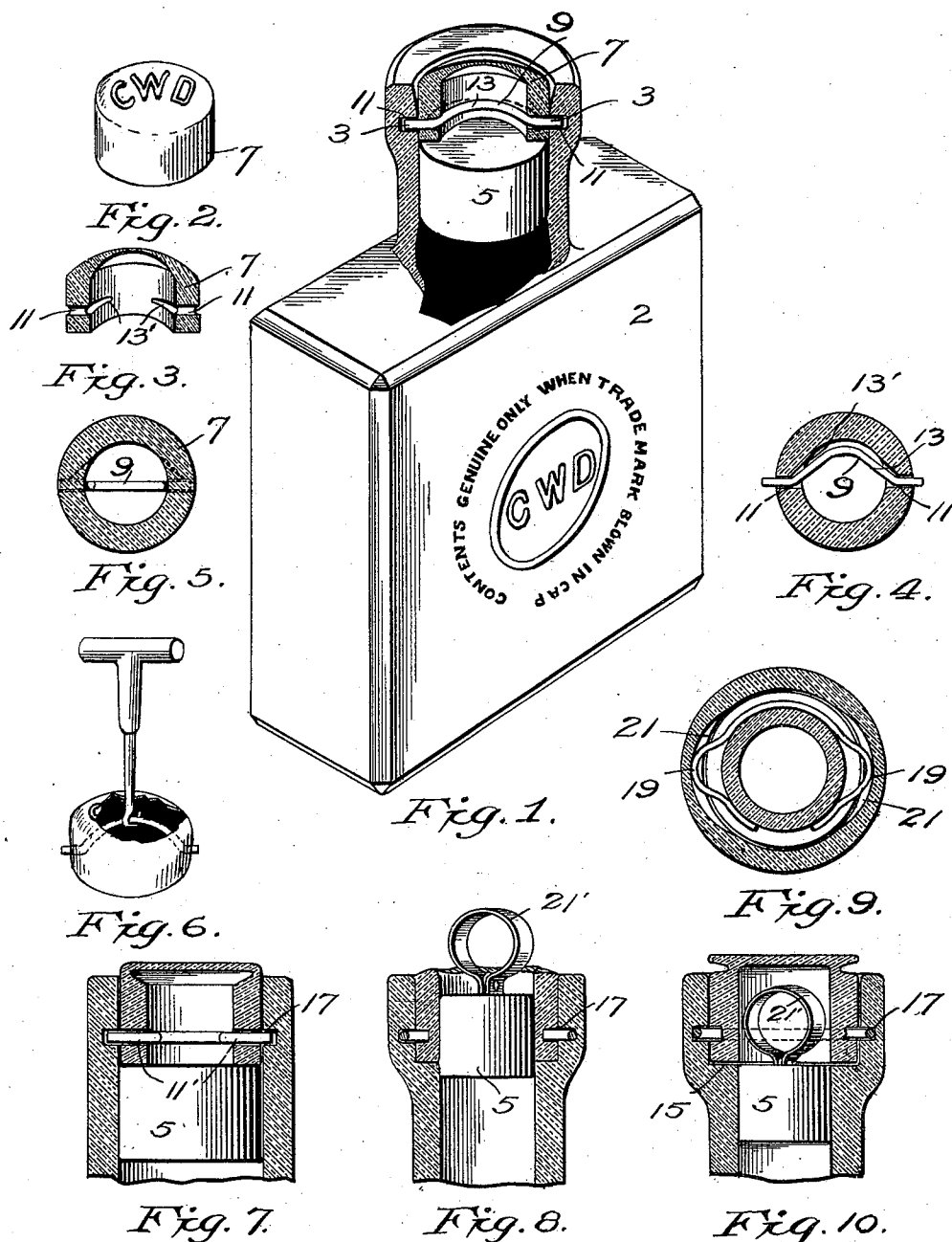


(No Model.)

C. W. DAVISON.
BOTTLE AND SEAL THEREFOR.

No. 574,671.

Patented Jan. 5, 1897.



Witnesses;
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UNITED STATES PATENT OFFICE.

CHARLES WRIGHT DAVISON, OF MINNEAPOLIS, MINNESOTA.

BOTTLE AND SEAL THEREFOR.

SPECIFICATION forming part of Letters Patent No. 574,671, dated January 5, 1897.

Application filed August 1, 1896. Serial No. 601,321. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WRIGHT DAVISON, of the city of Minneapolis, county of Hennepin, State of Minnesota, have invented certain new and useful Improvements in Bottles and Seals Therefor, of which the following is a specification.

The object of this invention is to provide an improved bottle and a seal therefor which will prevent the use of a bottle after it has once been filled and the contents removed, thereby preventing the fraudulent refilling of bottles with spurious articles.

The invention consists generally in a bottle having a cap that is applied thereto over a suitable cork or stopper and which is locked to the bottle by an internal catch or spring, so as to be incapable of being removed except by first breaking in the top of the cap and thereby destroying it.

I apply a suitable trade-mark to the bottle and a duplicate of such trade-mark to the cap. When the cap is broken for the purpose of getting at the catch that holds it in position, this trade-mark is necessarily destroyed, and it is impossible to use the bottle again, as the bottle itself will contain a notice that its contents are genuine only when the trade-mark is blown or marked in the cap. The invention will be more readily understood from the following detailed description, taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a bottle and cap embodying my invention, the neck of the bottle and the cap being shown in section. Fig. 2 is a perspective view of the cap. Fig. 3 is a vertical section thereof. Figs. 4 and 5 are horizontal sections. Fig. 6 is a perspective view of the cap, showing the top thereof broken in and showing the application of a hook or tool for removing the wire or lock. Fig. 7 is a vertical section showing the cap in position in the neck of the bottle. Figs. 8, 9, and 10 are details showing a slightly-modified construction.

In the drawings, 2 represents the bottle, which may be of any ordinary or preferred size, shape, or construction. It is provided in its neck either with two recesses 3 3, arranged opposite each other and each adapted

to receive the end of the wire, or, if preferred, these recesses may take the form of an annular groove, extending around the bottle inside the neck thereof. I prefer to place in the bottle an ordinary stopper 5, which is pushed down in the lower part of the neck of the bottle.

7 represents a cap formed of any suitable material and having a hollow center. This cap is preferably formed of glass, terra-cotta, papier-mâché, soft metal, or similar material, and is provided with a thin paneled top, upon which is blown, impressed, or otherwise placed a suitable trade-mark or design that is blown or marked upon the bottle. Within this cap is placed a wire 9, having its ends projecting through openings 11 in the sides of the cap. The wire is in the form of a spring preferably, having a centrally horizontally-bent portion 13, and the ends of the wire normally project through the walls of the cap, as shown in Fig. 4. After the stopper 5 is put in position the ends of the spring 9 are forced back, so as to be substantially flush with the outer surface of the cap, and the cap is then pushed down into the neck of the bottle until the ends of the spring enter the recesses or grooves 3 in the wall of the neck of the bottle. As the end of the stopper is preferably convex and down flush with the top of the bottle the stopper cannot be gotten at with tools.

The stopper will form a seal for the bottle, and before the cork can be removed the top of the seal must be broken in, as indicated in Fig. 6, or cut into in a way to destroy the trade-mark if of other material, when the wire or spring 9 can be grasped by a hook or other suitable instrument, as shown in Fig. 6, and drawn out through the top of the cap. The remaining portion of the cap can then be removed, after which the stopper 5 may be drawn out in the usual way. I prefer also to form a cap 7 with grooves 13', that extend in a horizontal direction a short distance from the inner ends of the holes 11, so that when the wire is in place the legs of the bend 13 will lie in these grooves, as shown in Fig. 4. Then when it is desired to remove the wire by turning it from a horizontal to a vertical position, as shown in Fig. 5, the surface

above said grooves will act as a cam and will draw the parts of the spring together, and thereby draw the ends of the springs back flush with the outer surfaces of the cap, as indicated in Fig. 5.

I preferably make the cap with a thin top, as shown in Figs. 3 and 7, which may be either flat or convex, so as to permit the formation or application of the trade-mark there-to. In some instances I prefer to form the bottle with an enlarged portion in its neck at the top thereof to receive the cap 7, as shown in Figs. 8, 9, and 10. As here shown, the cap rests upon a shoulder 15, and a wire or spring 11' rests in a groove 17, formed in the surface of said cap. The ends of this spring are made with the bends or loops 19, as shown in Fig. 9, and they are adapted to spring into the recesses 21 in the neck of the bottle. The opening in the cap is in this instance of the same diameter as the opening in the neck of the bottle, so that after the top of the cap is broken off the cork 5 may be drawn out through the cylindrical portion of the cap. A corkscrew 21' may be put into the cork when it is inserted, and it will remain there in position to be taken hold of to draw out the cork after the cap is broken through.

I do not confine myself to any particular construction, shape, or material for the cap or of the bottle, it being necessary only that the cap shall be provided with a suitable spring or dog arranged to engage a recess in the interior surface of the neck of the bottle, and so arranged that the cap must be broken and any trade-mark or design thereon be destroyed before access can be had to the dog or lock for the purpose of removing the cap, or where the cap is not removed before the cork can be removed through such cap.

By blowing a suitable trade-mark or design upon the bottle itself and a corresponding design or trade-mark upon the top of the cap it is made impossible for any person after a bottle has once been opened to fill it again without leaving it in imperfect condition, that is, lacking a cap with a trade-mark corresponding to that on the bottle, so that it will be apparent that it is not the original bottle and genuine contents.

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

1. The combination, with a suitable bottle, of a cap for the neck thereof, said cap having a thin or paneled top adapted to be easily broken or shattered, and a lock for said cap within the cap and accessible and removable only when or after the said thin or paneled top of the cap is broken or removed, substantially as described.

2. The combination, with a suitable bottle, of a cap for the neck thereof, said cap having a thin or paneled top, means connecting the cap and the neck of the bottle to lock the cap, whereby the cork of the bottle is also locked, said lock or means connecting the cap and

the neck of the bottle, being accessible only when or after the top of said cap is broken or removed, substantially as described.

3. The combination, with a suitable bottle, of a cap for the neck thereof, said cap having a thin or paneled top, means for locking said cap to the neck of the bottle, said means being accessible and removable only from within the cap and only when or after said thin or paneled top thereof is broken or removed, substantially as described.

4. The combination, with a suitable bottle provided with a groove or recess in the inner surface of its neck, of a cap fitting into said neck and provided with a spring or dog arranged to enter said recess and lock the cap in the neck, said cap being provided with a thin or paneled top whereby upon breaking said top access may be had to said spring or dog for the purpose of removing said cap from the neck of the bottle.

5. The combination, with a suitable bottle provided with a groove or recess in the inner surface of its neck, of a cap fitting in said neck and provided with a thin or paneled top and with a spring or dog arranged to engage said recess and also the cap, access to said spring or dog being possible only when said top of the cap is broken or removed, substantially as described.

6. The combination, with a suitable bottle having a groove or recess in the interior surface of its neck, of the cap 7 having a thin or fragile top, a spring arranged within said cap in position to engage the groove or recess in the neck of said bottle, whereby on breaking said cap access may be had to said spring for the purpose of removing the same and permitting the removal of said cap, substantially as described.

7. The combination, with a bottle having the groove or recess in the interior surface of its neck, of a cork arranged in the neck of said bottle below said groove or recess, the cap having a thin or paneled top and provided with a spring engaging in said groove or recess, whereby access may be had to draw said cork only by first breaking said thin or paneled top of the cap and thereafter withdrawing the said spring.

8. The combination, with the bottle having a suitable recess in the interior surface of its neck, of the cap 7 having a thin or paneled top and having the hole 11, the spring 9 having the bend 13 and arranged with its end extending through said hole 11 and adapted to enter the recess in the neck of said bottle, for the purpose set forth.

9. The combination, with the bottle having the recess in the interior surface of its neck, of the cap 7 having the opening 11 and the horizontal groove 13, the spring 9 arranged in said cap and having its end projecting through said opening 11, and a portion of said spring resting in said groove 13 whereby when the top of the cap is broken the end of the wire may be withdrawn from the recess in the neck

of the bottle by turning said wire up into a substantially vertical position, for the purpose set forth.

10. The combination, with the bottle having
5 a suitable design or trade-mark blown or marked thereon, of a cap for the neck of the bottle, said cap having a thin or paneled top provided with a similar design or trade-mark,
locking means for securing said cap in position,
10 tion, and said locking means being accessible

only when or after the thin or paneled top of the cap which is provided with said design or trade-mark is broken or removed, substantially as described.

In testimony whereof I have hereunto set
my hand this 27th day of July, A. D. 1896. 15

CHARLES WRIGHT DAVISON.

In presence of—

C. G. HAWLEY,

A. C. PAUL.