R. W. WEBSTER.

BOTTLE CAP REMOVER.

APPLICATION FILED JULY 12, 1910.

1,009,873. Patented Nov. 28, 1911.

Fig. 1.

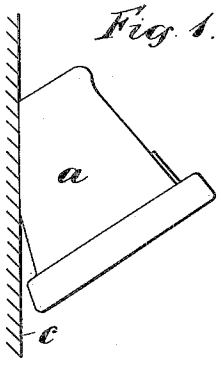


Fig. 3.

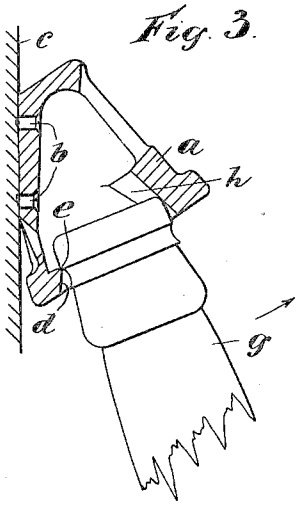


Fig. 2.

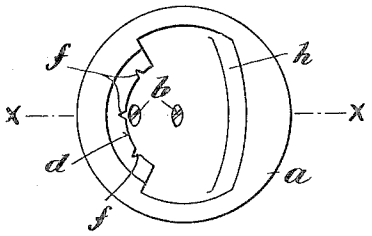


Fig. 4.

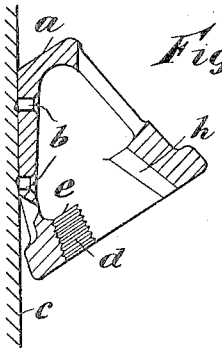
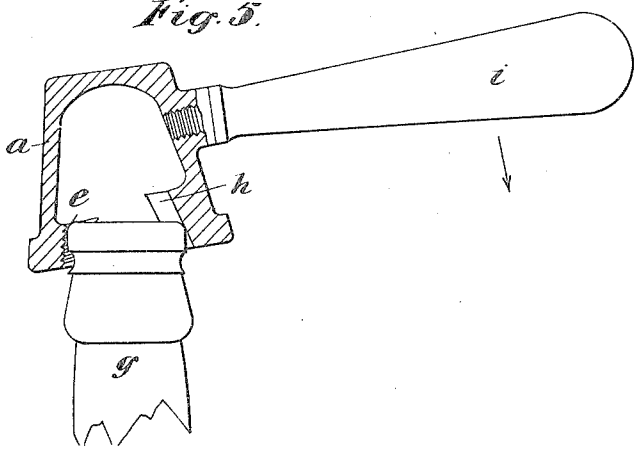


Fig. 5.



Witnesses.

Stephen Edward Gunyon

Alexander Edward Bell

Inventor.

Ralph Waldo Webster

By H. M. Wallace & Wood Att'y.

UNITED STATES PATENT OFFICE.

RALPH WALDO WEBSTER, OF LONDON, ENGLAND.

BOTTLE-CAP REMOVER.

1,009,873. Specification of Letters Patent. Patented Nov. 28, 1911.

Application filed July 12, 1910. Serial No. 571,606.

To all whom it may concern:

Be it known that I, RALPH WALDO WEBSTER, a subject of the King of Great Britain, residing at London, England, have invented a new and useful Improvement in Bottle-Cap Removers, of which the following is a specification.

It is well known that bottles are frequently closed by stopper devices of the kind known as "crown seals" that is to say devices which consist of a cork or other packing disk or ring contained within a metal capsule with a corrugated or crimped lower edge. The capsule is placed on the top of the bottle neck and while the cork or other packing disk or ring is being compressed on to the top of the bottle neck by external pressure, the corrugated or crimped lower edge of the "seal" is forced radially inward so as to tightly engage the side of the bottle neck.

The object of the present invention is to provide means for unstoppering bottles and the like which have been closed by a capsule the bottom or other edge of which does not afford sufficient projection for the engagement therewith of the unstoppering device, and which means is adapted to engage with the outer surface of the capsule or other closing device.

In the accompanying sheet of drawings Figure 1 is an elevation of an unstoppering device constructed in accordance with my present invention; Fig. 2 is an underside view of Fig. 1; Fig. 3 is a longitudinal section on line X—X of Fig. 2; and Figs. 4 and 5 are similar views illustrating modifications.

Similar letters of reference relate to like parts in all the figures of the drawings.

a is a hollow conical metal fitting adapted to be secured by screws *b* for example to a counter or other base or support *c* preferably in such a position that its larger and open end is inclined at a suitable angle to the surface of such base or support as shown in Fig. 1. It is obvious however that the fitting may be varied in general form as may be desired. At the lower part of the internal surface of the said open end of the fitting one or more projecting surfaces *d* are provided, slightly inclined by preference as shown, and terminating at their inner ends in more or less sharp edges *e* which may be plain, or furnished with serrations or notches *f* as shown in Fig. 2, and may be either straight or curved so as to correspond more or less with the circular curvature of the neck of the bottle or other receptacle which is shown at *g* in Fig. 3. Diametrically opposite to the beforementioned sharp edges *e* is provided an inclined surface *h* upon the upper part of the internal surface of the open end of the fitting, which surface may be regarded as a substitute for the central boss, stop or fulcrum of the openers hereinbefore referred to.

The end of the neck of the bottle *g* to be unstoppered is inserted into the open end of the fitting in such a manner that that portion of the capsule which surrounds the neck of the bottle rests upon the sharp inner edge or edges *e* of the lower incline *d*. Upon raising the bottle by its lower end in the direction of the arrow in Fig. 3, the upper edge of the capsuled neck thereof will be brought to bear against the incline *h*, and any further movement of the bottle *g* in the same direction will first cause the upper edge of the capsuled end of the neck thereof to be forced inwardly up the incline *h*, the opposite edge of the said capsuled neck being thereby forced on to the sharp serrated or notched edge or edges *e* of the surface *d*; and secondly will drag the neck of the bottle out of the capsule, which latter will be free to fall out of the fitting immediately the pressure of the neck of the bottle on the incline *h* is released.

In some cases instead of a single continuous or divided sharp edge *e*, I provide a number of more or less sharp edges, either plain, or serrated or notched, upon the surface *d* (Fig. 4) in order to allow for any variation in the diameters of the necks of the bottles, or in the shape of the shoulders, projections, or grooves formed thereon or therein.

It will be obvious that the position in which the beforementioned unstoppering device is fixed, and the positions of the acting surfaces thereof, may be varied according to requirements. It will be also obvious that the device is equally applicable in cases in which the packing-ring is situated on the exterior of the bottle-neck instead of on the top thereof.

In Fig. 5 my improved unstoppering device is shown arranged as a portable hand tool. In this case the bottle *g* may be held stationary and the tool be placed in position thereupon as shown in Fig. 5. It will be understood that when pressure is exerted

upon the handle *i* in the direction of the arrow, the inclined surface *h* will force the sharp edge or edges *e* of the surface *d* into the capsule of the bottle, and continued pressure upon the handle *i* in the same direction as before will drag the capsule off the top of the neck of the bottle *g*.

Claims:

1. A device for removing stoppers of the kind referred to from bottles and other receptacles consisting of a hollow metal fitting with stopper engaging surfaces positioned diametrically opposite one another, one of said surfaces being provided with an edge adapted to engage the stopper, the other of said surfaces being inclined toward said first mentioned surface whereby as the neck of the bottle or other receptacle is inserted in the device the stopper will be forced by said inclined surface against the edge of said first mentioned surface.

2. A device for removing stoppers of the kind referred to from bottles and other like receptacles which consists of a hollow metal fitting adapted to be fixed to a counter or other base, and furnished with a plurality of projecting surfaces provided with curved edges and an inclined surface positioned opposite to said projecting surfaces.

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

RALPH WALDO WEBSTER.

Witnesses:

STEPHEN EDWARD RUNYON,

RIPLEY WILSON.