Sept. 2, 1924. 1,507,277

J. S. DUNLAP

BOTTLE SEAL CAP LIFTER

Filed July 28, 1922

Fig. 2.

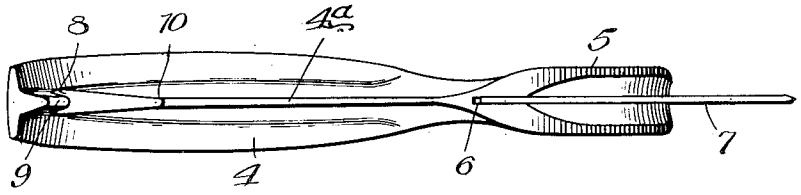


Fig. 1.

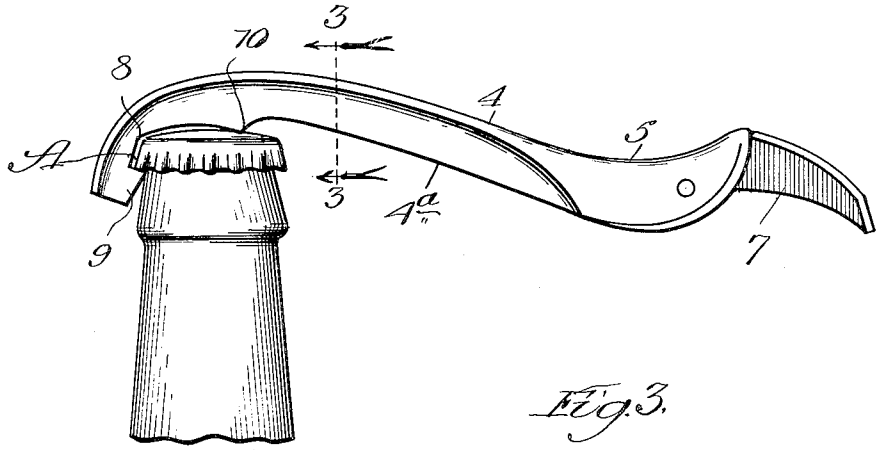
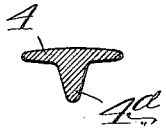


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN S. DUNLAP, OF CHICAGO, ILLINOIS.

BOTTLE-SEAL-CAP LIFTER.

Application filed July 28, 1922. Serial No. 578,137.

To all whom it may concern:

Be it known that I, JOHN S. DUNLAP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Bottle-Seal-Cap Lifters, of which the following is a specification.

My invention relates to an improvement in the class of devices for removing metal stopper caps, and more particularly those of the well-known crown-cap variety, from bottles, and any kind of vessel on which such caps are used; and it is fully described and explained in the specification and illustrated in the accompanying drawing, in which:

Figure 1 is a view in side elevation showing my improved cap-lifter provided on one end of a can-opener, and illustrating its application to a bottle-sealing cap;

Figure 2 is a bottom plan view of the device involving my invention, and

Figure 3 is a section on line 3—3, Fig. 1.

I have elected to show my improvement on the handle of a particular construction of can-opener, because it is in that form that I manufacture it for the market in order to provide the user with a handy implement having a can-opener on one end and a bottle seal-cap lifter on the opposite end of a common handle for convenient use for either purpose. However, it is only the handle of the illustrated implement which constitutes a necessary feature with the other elements of my improved device.

The handle 4 preferably of aluminum, is of general T-shape in cross-section to dispose its upper or main wall horizontally and to provide a central web 4^a on its under side; and it is shown as terminating at one end in a saddle-shaped upwardly-curved section 5 containing in its under face a central slot 6, in which is rigidly secured a known general form of blade 7 for puncturing and cutting a can-top by manipulating the handle for the can-opening purpose. The webbed handle is curved downwardly at its opposite end, and an angular section 8 of the web is cut away, or the continuity of the web is otherwise there interrupted (as in casting the handle), to leave a portion thereof at the inner face of the curved extremity of the handle in the form of a rearward projection 9 affording a hook-like element for the purpose hereinafter explained. The rearwardly extending arm of the angular web-section 8, which is shown to conform, approximately, to the cross-section of a rounded cap-top, terminates in a fulcrum-point 10.

By virtue of its T cross-section the device provided by the invention is both stronger and more rigid than devices of a like nature heretofore known. The strains to be resisted are tensile in the upper portion of the device, compressive in the lower portion thereof and a tendency to lateral flexure. The horizontal portion of the T form amply resists both the tensile stresses and the flexuring tendency, and the web provides the greatest stiffness possible with a given amount of material to resist the compressive stresses. While new in a cap lifter, the same principle has long been utilized in the familiar structural steel beam.

To use the lifter, the handle is applied to extend the angular web-section 8 centrally across the top of a bottle-closing cap A with the hook 9 engaging the cap-edge and the fulcrum 10 bearing on the cap at a point thereon diametrically opposite that at which the hook engages the cap-edge, whereby pressure on the handle operates it, as a lever of the power-fulcrum-weight class, to pry and lift the cap off the bottle-neck.

As will be seen from the drawing the fulcrum 10 bears on the cap at a point within its circumferential edge. When downward pressure is exerted on the handle the pressure exerted on the top of the cap causes the depression of the same with a resultant flaring of the cap-edge thus facilitating the entry of the hook 9 thereunder with consequent lessening of the liability of displacement of the hook by slipping.

I realize that considerable variation is possible in the details of construction herein shown and I do not intend to limit my invention thereto except as pointed out in the appended claim, in which it is my intention to claim all the novelty inherent in the invention as broadly as permissible by the state of the art.

I claim:

A bottle cap lifter adapted to remove a bottle cap of ductile material and having a convex upper surface, said lifter comprising a handle-portion equipped at its forward end with a hook adapted to take under the edge of the cap, and a fulcrum-forming projection so located relative to the area of the cap surface as to bear thereon at a point

within its marginal edge and within the inner edge of the neck of a glass bottle when said lifter is applied to a cap thereon whereby to prevent the splintering of the bottle neck and consequent lodgment of particles of glass in the bottle contents when pressure is applied to said fulcrum-forming projection, the edge of the lifter between said hook and projection being slightly spaced from the cap and arranged to contact therewith through initial depression of the projection and the forcing downwardly of the convex upper surface of the cap with resulting spreading of its circumferential edge to assist in the tight engagement of said hook under said edge, the edge of the lifter adjacent the projection on the side thereof opposite to the hook being spaced from the cap a greater distance than the first mentioned edge whereby to avoid contact of such edge with the cap in the downward cap-removing movement of the lifter.

JOHN S. DUNLAP.