

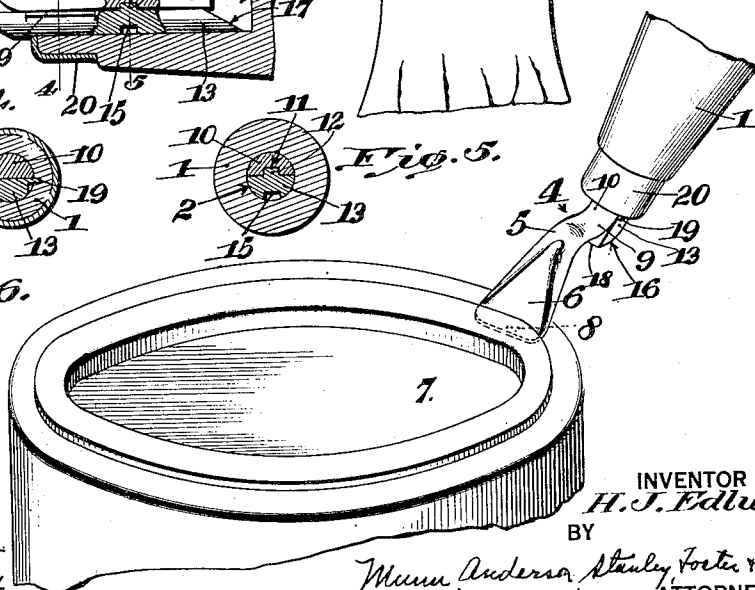
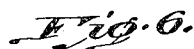
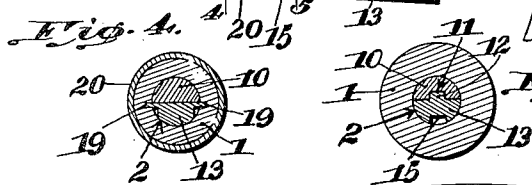
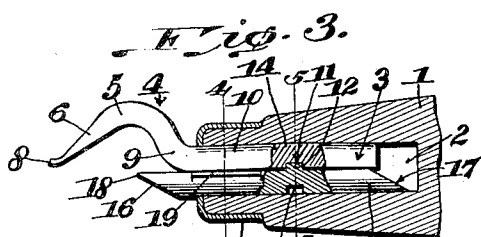
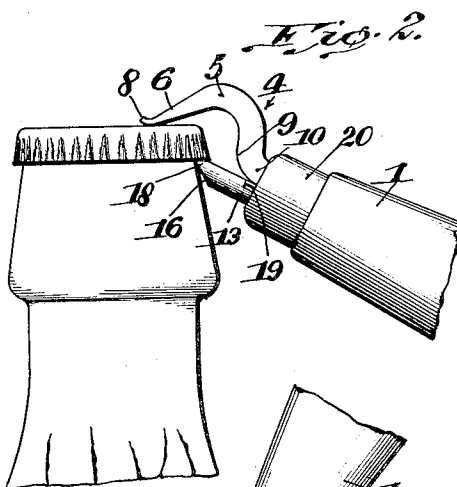
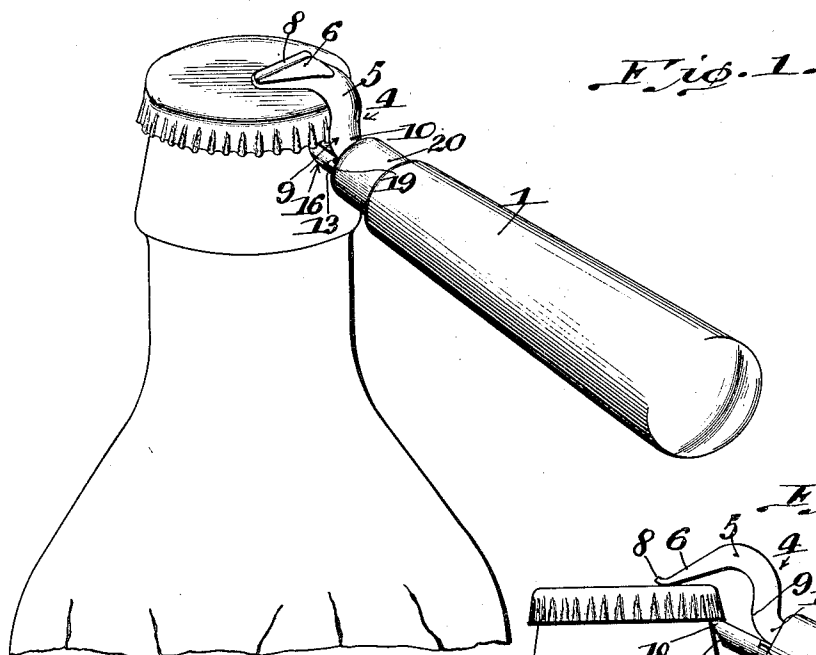
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H. J. EDLUND

1,934,594

CONTAINER OPENER

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WITNESSES
Lawrence D. Harlan
J. P. Schwott

INVENTOR
H. J. Edlund,
BY
Munn, Anderson, Stanley, Foster & Riddy
ATTORNEY

UNITED STATES PATENT OFFICE

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CONTAINER OPENER

Henry J. Edlund, Burlington, Vt.

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5 Claims. (Cl. 7—1)

This invention relates to improvements in container openers, and its objects are as follows:

First, to provide an opener which will work equally as well in removing any one of several types of closures from as many kinds of containers, as for example metal caps from bottles, friction type covers from glasses, press-in tops from cans, etc.

Second, to make the prying member as a two-part element thereby to secure certain manufacturing advantages not securable otherwise, as for example to make the hook element of half-round wire so that the nether side of the hook will be flat.

Third, to make the shank assemblage of half-round wires, assembled in cross-sectionally round formation, the shanks being interlocked to prevent relative movement when driving the assemblage into the handle and one of the shanks having outstruck flanges, or the like, to bite into the handle and ferrule to prevent turning of the assemblage.

Fourth, to undercut the exposed point of the companion shank in such a manner that the opener will not be deflected by any part of the head, rim or bulge of any bottle, jar or can.

Fifth, to broaden the point of the hook so as to distribute the pressure over a large area and prevent severe buckling or denting of the cap to be removed.

Sixth, to give the broad point a slight upturn, thereby enabling a rolling action and facilitating the operation when removing a cap or cover.

Seventh, to slightly bow one of the shanks so as to provide a taper-shank assemblage which is assured of remaining in the handle when once driven in.

Other objects and advantages will appear in the following specification, reference being had to the accompanying drawing in which:

Figure 1 is a perspective view illustrating the use of the improved opener in removing a bottle cap,

Figure 2 is a side elevation of a part of the structure shown in Figure 1, particularly illustrating how the undercut of the exposed companion shank point clears the adjacent part of the bottle,

Figure 3 is a detail sectional view of the prying member,

Figure 4 is a cross section taken on the line 4—4 of Figure 3,

Figure 5 is a cross section taken on the line 5—5 of Figure 3,

Figure 6 is a perspective view illustrating the

use of the opener as the means for prying a press-in top off of a can.

As is commonly known, there are several kinds of openers on the market, each virtually being confined to use in removing a single type of closure. None of these kinds is entirely satisfactory, it being a common occurrence that the opener will not only slip from the opening position but will also damage the closure to such an extent that its re-use is prevented, this fault applying particularly to the instance of jelly-glass covers.

An outstanding purpose of the improved opener is its universal use to a limited extent. It is adapted to open bottle caps of all kinds safely and without slipping. It will also remove friction type covers from glass jars, and is well adapted to prying up and off press-in tops from cans.

Reference is now made to the drawing. A handle 1, of wood or other suitable material, has a bore 2 in one end (Fig. 3) for the purpose of receiving the shank assemblage 3 of the prying member generally designated 4. It is this member that constitutes the invention.

Its details comprise a hook 5 which merges at its free end into a broad pointed pressure member 6 (Fig. 6) for the purpose of insertion under the rim of a can top 7 so that the latter can be pried from the can. The broad point is produced by flattening the end of the hook 5, and in doing the flattening the point is made rather broad, as will be seen in Fig. 6, thereby producing a very effective prying instrument.

The end of the broad point is upturned at 8. The upturn is slightly rounded so as to enable a rolling action when using the opener as in Fig. 1. In this particular case (Fig. 1) the advantage of the broadened point is the distribution of the pressure over an appreciable area, preventing severe buckling or denting of the cap.

At the base of the hook 5 there is a heel 9. This connects with the shank 10. The shank is half-round in cross section, being made of wire or other stock of that cross-sectional shape. The half-round cross-section prevails in the heel 9 and hook 5 but from there on gradually disappears into the point 6. The plane part of the half-round cross-section insures the bottom of the upturn 8 being perfectly level across.

A recess 11 (Figs. 3 and 5) in the plane part of the shank 10 receives a tenon 12 on the companion shank 13. In forming the recess 11, which is generally done under pressure, the shank 10 is slightly bowed as indicated at 14, the recess being in the concavity of the bow. The shank 13

is made of the same half-round stock as the shank 10, and when the two-part element is put together the bow 14 provides a taper-shank which insures a very tight driving fit of the prying member 4 in its handle 1.

The tenon 12 is formed by pressing in on the companion shank as at 15 with an appropriate implement. The ends 16, 17 of the companion shank 13 are cut on a bias. The bias 16 defines an undercut which recedes from the lifting point 18. The bias 17 is merely incidental to the cutting. Successive bias cuts separate the stock into appropriate lengths and at the same time produce the undercut 16 without a further operation. The undercut of the exposed point 18 particularly avoids conflict of the opener with any bead, rim or the like on the container, and its presence prevents the opener from being deflected by any such outstanding parts as just mentioned.

In pressing out the tenon 12 on the shank 13, the latter is also provided with flanges 19 (Figs. 3 and 4). These are made by forcing out a little of the metal on each side. The flanges extend laterally and bite into the handle 1 as well as its ferrule 20 when the prying member 4 is driven home, thereby preventing turning of the assemblage. In this operation the tenon 12 and recess 11 make an interlock between the elements of the member 4, preventing any relative movement.

As shown in Fig. 3 the point 18 stands out forwardly of the hook heel 9 when the assemblage is completed. The point thus constitutes a prong to catch under a cap (Fig. 1) or the like, for the prying loose thereof. Reverting to the flanges 19, it should be noted that these may be substituted by some other outstruck formation and serve the same purpose.

The recess 11 is so spaced with reference to the heel 9 that the point 18 will come just right with respect to the same heel. This also necessitates the proper positioning of the tenon 12. In speaking of 18 as a point, the term must be understood to mean a broad or spade point. The undercut 16 starts at the rounded part of the shank 13 and goes toward the plane part. The point, therefore, ends up with a breadth equal to the cross distance of the shank 13, and it will be more or less sharp.

Due to the making of the elements 10, 13 of half-round stock, the manufacture of the prying member is facilitated in the formation of the hook 5 and point 18; also of the flanges 19. The bow 14 could not be produced were the shank 10 not of half-round stock, and were it desired to manufacture a taper in a cross-sectionally solid shank the cost would prove excessive for an implement which is primarily intended to be marketed cheaply.

The operation

is readily understood. For the removal of a bottle

cap as in Fig. 1, the point 18 is caught under the rim of the cap and the upturn 8 applied on top. The point 18 is just far enough below the upturn 8 to dispose the handle 1 at a convenient inclination with respect to the bottle when the opener is applied as shown. An upward lift removes the cap, and during the lifting movement the upturn 8 partakes of an easy rolling action which facilitates removal and prevents mutilation of the cap.

In removing press-in can tops (Fig. 6) the spade point 6 is used as a prying instrument. The twisting action necessarily applied to the handle 1 is adequately resisted by the flanges 19 which prevent the loosening of the handle with respect to the prying member 4.

I claim:

1. An opener comprising a handle, a prying member consisting of a two-part element, one part of the element being a prong the other part being a broad point, means for interlocking the parts of said element, and means on one of the parts biting into the handle to prevent turning of the element.

2. An opener comprising a handle having a bore, a prying member consisting of two half-round shanks driven into the bore with the flat sides confronting, a bow in one of the shanks converting the composite shanks into a taper-shank, and a hook and a point on the respective shanks.

3. An opener comprising a handle, a prying member consisting of a two-part element inserted in the handle, one of the parts comprising a broad-pointed hook merging into a heel adjacent to the hook, the other of the two parts having a point adjacent to the heel, said last point and the point of the hook being offset in the cross dimension of the prying member.

4. An opener comprising a handle, a prying member carried by the handle, said member consisting of a pair of half-round shanks having the plane sides together, one of the shanks having a recess the other a tenon to provide an interlock, a broad-pointed hook on one of the shanks, said hook having a heel merging into the respective shank, a point on the exposed end of the remaining shank, said point being slightly in advance of the heel, and means on one of the shanks to keep the prying member from turning in the handle.

5. An opener comprising a handle having a bore, a prying member consisting of two half-round shanks driven into the bore with the flat sides confronting, a bow in one of the shanks, said shank also having a recess in the concavity of the bow, a tenon on the other shank fitting in the recess, and a hook and a point on the respective shanks.

HENRY J. EDLUND.