United States Patent [19]

Huff

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[54] **BOTTLE OPENER**

[76] Inventor: **Otto Huff,** Feuerbachstrasse 19, Bochum, Germany

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[52] **U.S. Cl.**.....**81/3.1 C,** 7/14.6

[51] **Int. Cl.**.....**B67b 7/44**

[58] **Field of Search**.....81/3.1 R, 3.1 C, 81/3.34, 3.4, 3.46 R; 7/14.6

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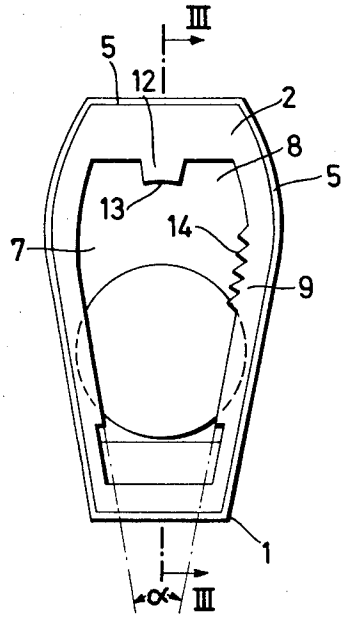
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Primary Examiner—Robert C. Riordon
Assistant Examiner—Roscoe V. Parker
Attorney—Michael S. Striker

[57] **ABSTRACT**

A combined bottle opener and reclosure device for crown cap and twist-open type bottle closures is composed of a flat, normally open box-like structure rectangular in cross-section and provided with a cover plate across the open side which has an opening therein. The circumferential edge of the opening is provided with a plurality of cap-engaging projections and a compressible resilient seal pad is retained in the box-like structure below said opening at one end thereof adapted for reclosure of a previously opened bottle.

20 Claims, 6 Drawing Figures



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SHEET 1 OF 2

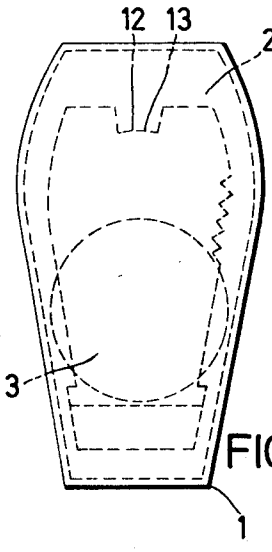


FIG. 2

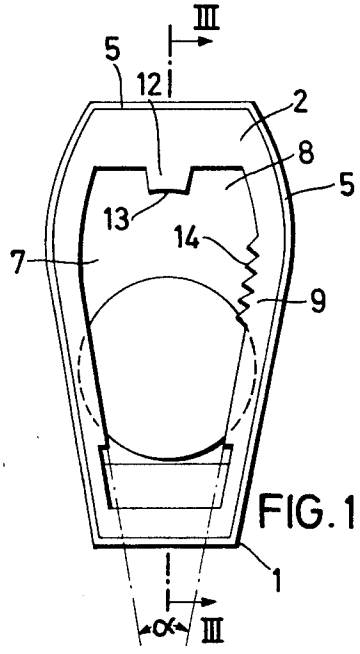


FIG. 1

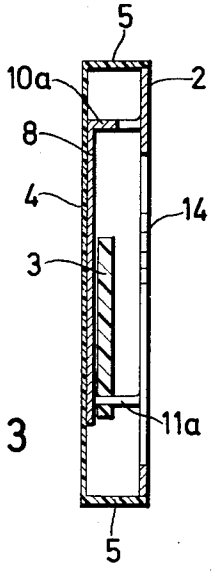


FIG. 3

INVENTOR
OTTO HUFF
BY Richard S. Stoke
ATTORNEY

FIG. 4

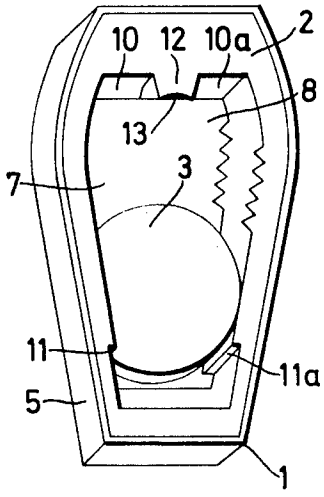
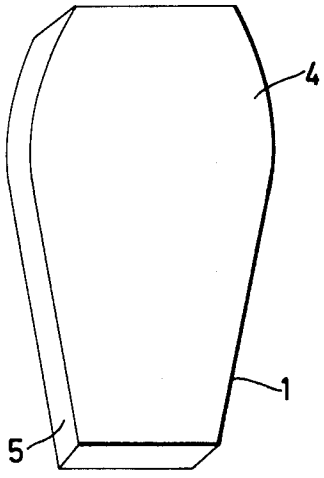


FIG. 5



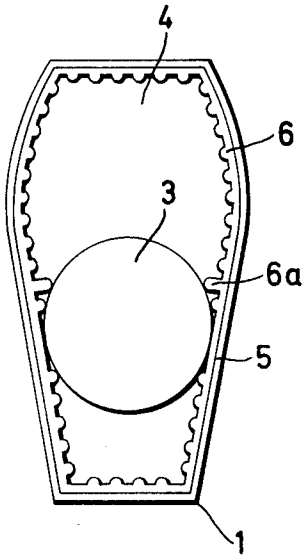


FIG. 6

INVENTOR
OTTO HUFF
BY
Robert I. Mackie
ATTORNEY

BOTTLE OPENER

BACKGROUND OF THE INVENTION

The present invention relates in general to bottle openers and more in particular to a combined bottle opener and reclosure device.

Bottle openers are known in the art constructed in the form of a box-like enclosure having a cover plate fastened thereto which is provided with a pair of openings of different dimensions. The smaller opening defines the bottle opener for crown caps and the larger opening defines a reclosure for previously opened bottles. The crown cap removing opening is of substantially rectangular shape with the longest side disposed transverse to the longer center line of the opener. The crown cap removing opening in the known device has a prong along one side for engagement underneath the rim of the crown cap.

In the known device, the larger of the openings in the cover plate is offset from the smaller opening in regard to the center of the device and is of generally trapezoidal shape. This opening in conjunction with a resilient pad disposed in the device is adapted for temporary reclosure of a previously opened bottle.

The known device has a series of disadvantages in that first two openings of different and irregular shape must be provided in the cover plate, usually done by punching. During use of the device the portion of the cover plate between the two openings is subjected to extreme bending stresses by the prying force directed against the crown cap. Thus, this portion must be reinforced to prevent distortion or breakage. This detrimental effect in the known device is further amplified in that the crown caps during use of the device abut against the side of the opening opposite the prong which requires the crown caps to be bent out of shape prior to removal by application of substantial force. Secondly, in the known device a user may inadvertently try to remove the crown cap by engagement with the side of the opening opposite from the prong. This causes the relative small and weak plate portion between the opening and the edge of the cover plate to be deformed or may even cause the cover plate to be loosened from the housing. Thus, the known device provides no assurance that it will be used correctly so that by inadvertent incorrect usage portions of the device will be deformed or the whole device may be damaged and rendered useless by loosening of the cover plate.

In view of the relative large prying forces to be exerted during removal of the crown cap, the known device requires the cover plate—which is the primary force absorbing member—to be securely attached to the box-like housing of the device which commonly is made of a plastic material such as for instance polystyrol. Attachment of the cover plate is usually by means of an adhesive which in the known device requires the provision of relatively large gluing surfaces between the housing and the cover plate for the above mentioned reasons. This requires additional work procedures and utilization of a dependable metal-to-plastic adhesive which must also be heat-, water- and acid-resistant. However, this kind of adhesive attachment can only be done by the original manufacturer of the device which requires also that marks, advertisings or other impressions adapted to be provided on the housing or cover

plate of the device have to be made at the manufacturer's plant which is not always possible for economical or other reasons.

Furthermore, in the known device, rigid attachment of the cover plate to the housing is required for the following reason: By utilization of the reclosure means the edges of the larger opening in the cover plate are adapted to engage behind the rim of the bottle by which the open mouth of the bottle will be pressed against the resilient pad in the housing. This causes a reaction force in the opposite direction which tends to move the cover plate out of the housing. Thus, a rigid adherence of the cover plate is imperative.

Additionally, the resilient reclosure pad in the known device must be bonded within the housing at increased production costs of the otherwise relatively inexpensive mass article. Here likewise the adhesive for the resilient pad must be heat-, water- and acid-resistant.

A further disadvantage of the known device resides in that it can only be used for opening of crown caps and reclosure of opened bottles but not for removal of twist-off caps widely used at the present. Twist-off caps as presently used consist of a thread cap which is removably connected to a ring portion around the neck of the bottle below the mouth rim. The thread cap is connected to the ring portion by means of a plurality of individual bridge portions which are adapted to be sheared off by respective rotation of the thread cap whereby the ring portion remains in position around the neck of the bottle. Manual removal of the thread cap is often difficult and requires considerable force. Moreover, finger injury may be incurred due to the sharp remnants of the sheared-off connecting portions of the metal cap. Thus in many instances, a user will depend on the aid of a mechanical tool, such as pliers, to remove the twist-off caps. Such tools are ill-suited for the intended purpose since the caps are usually made of thin sheet metal and thus subject to deformation if ordinary clamping tools are used, which furthers the aforementioned difficulties rather than providing a solution.

The present invention provides an improved device to overcome the above disadvantages of the prior art.

SUMMARY OF THE INVENTION

Accordingly, it is the primary object of the present invention to provide an improved combined bottle opener and reclosure device of the type herein described which is universally adaptable for the safe removal of crown caps as well as twist-off caps and air-tight temporary reclosure of previously opened bottles.

The foregoing object is obtained in that the cover plate of the device is provided with a single longitudinal opening which is correspondingly shaped in accordance with the present invention to serve simultaneously as crown cap opener, twist-off cap remover and reclosure means.

Preferably, the longitudinal opening extends substantially along the entire length of the cover plate and at one end is shaped to provide a crown cap removal means whereas the opposite end is shaped to serve as reclosure means. At least a portion of one longitudinal side of the opening intermediate the ends is formed with teeth to permit easy removal of twist-off caps.

In a preferred embodiment of the invention the single opening in the cover plate is shaped to comprise two longitudinal portions each having longitudinal converg-

ing sides in directions towards the opposite smaller end sides. One longitudinal portion is substantially shorter than the other for a reason to appear hereafter.

The shorter portion of the opening has a transverse side between the converging longitudinal sides which is longer than the opposite transverse side and is provided with prying means for engagement under the rim of the crown cap.

The longer portion of the opening considerably decreases in width towards the end. The housing of the device is shaped to correspond to the shape of at least the longer portion of the opening so as to provide converging side walls which retain between them a resilient pad inwardly of the housing below the cover plate which serves as reclosure member upon extension of the open bottle neck through the longer portion of the opening.

A portion of at least one longitudinal side of the opening is provided with a plurality of planar—that is, in the plane of the cover plate—extending projections which provides external cap gripping means for the removal of twist-off caps by applying the present device over the twist-off cap in the area of the shorter opening and rotating the device in the respective direction.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top plan view of one embodiment of the present improved device;

FIG. 2 is a bottom plan view of the device in FIG. 1;

FIG. 3 is a longitudinal cross-section through the device as seen along line III—III;

FIG. 4 is a perspective front illustration of the device in FIG. 1;

FIG. 5 is a perspective rear view of the device in FIG. 1; and

FIG. 6 is a front plan view of a modified embodiment of the present improved device shown without the front cover which is of identical construction as that shown in FIGS. 1—4.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the drawings, the improved bottle opener of the present invention is essentially comprised of three individual parts, namely a flat, box-like housing 1, a cover plate or insert 2 (not shown in the embodiment in FIG. 6) and a resilient disk 3.

With particular reference to FIGS. 1 to 5, the box-like housing 1, which is rectangular in cross-section as shown in FIG. 3, is comprised of a bottom 4 and circumferential side wall 5 extending therefrom.

As shown in the Figures, housing 3 has a planar configuration substantially resembling a tumbler. Although this configuration is preferred for reasons to appear hereafter, a substantially rectangular or trapezoidal planar configuration may also be utilized.

Preferably, for reasons of simplicity, lightweight and economical production housing 1 is molded from a plastic material, such polystyrol.

Housing 1 as illustrated in FIGS. 1, 3, 4 and 6 normally is open at the front opposite the bottom 4 and is adapted to receive cover plate 2. The planar configuration of cover plate 2 corresponds to the configuration of housing 1 so that in assembly cover plate 2 extends over the open front of housing 1 between side walls 5 in substantially flush relationship as illustrated in FIG. 3.

Cover plate 2 designates the primary bottle cap removing member of the device and for this reason will be made of metal of suitable thickness, preferably stainless steel to prevent corrosion. It will be understood that cover plate 2 in view of the prying forces normally encountered in the removal of crown caps must be made of a material and of such cross-section as to be able to withstand these forces.

Cover plate 2 is provided with an elongated opening 7 of rather large dimension and likewise of a shape substantially corresponding to the planar configuration of the device. In practice opening 7 is preferably made by punching a corresponding area 8 out of the body of the plate without completely separating area 8 from the plate.

As particularly shown in FIGS. 3 and 4 punched out plate area 8 remains connected to the cover plate 2 by means of pairs of opposite longitudinally spaced rib portions 10, 10a and 11, 11a. After punching area 8 out of plate 2 the remaining portion of the plate forms a circumferential frame 9 adjacent the internal surface of side wall 5.

In assembly of the device and as particularly seen in FIG. 3 punched out area 8 will be mechanically depressed inwardly of housing 1 for flat abutment upon the bottom 4 to thereby support the remaining portion 9 of plate 2 in vertically spaced parallel aligned overlying relationship relative to bottom 4 by means of connecting ribs 10, 10*a* and 11, 11*a*. Ribs 10, 10*a* and 11, 11*a* are of predetermined length so as to space plate 2 in flush position with the circumferential edge of side wall 5.

Punched out plate area 8 may be attached to the bottom 4 of housing 1 by any known conventional means but preferably by means of an adhesive to securely maintain plate 2 in assembled position with housing 1.

Conversely, although not particularly shown in FIGS. 1 to 5 the side wall 5 of the housing 1 may be provided with internal integral abutments (such as 6 in FIG. 6) upon which the frame remnant 9 of plate 2 rests and which serve as support areas to adhesively bond plate 2 to the housing.

As previously mentioned the broadest section of plate opening 7 serves as the crown cap removing portion and is shaped to provide oppositely curved converging sides disposed at a maximum diametrical dimension across the device which substantially corresponds to the diameter of a conventional crown cap. The transverse side of the opening at this end is defined by the bent out rib portions 10 and 10*a* and a prong 12 extending in planar position inwardly of opening 7 between ribs 10, 10*a*. The inner edge 13 of prong 12 is curvilinear to correspond with the round configuration of the bottle neck.

The degree of extension of the prong 12 inwardly of opening 7 (preferably from 4 to 5 mm) together with its predetermined width dimension assures secure and dependable engagement behind the rim of a crown cap to permit relative effortless removal of the crown cap

from the bottle neck. During use of the device the side of the crown cap opposite the prong rests upon the resilient pad 3 in the housing to thereby eliminate any significant reaction forces as by rigid abutments in conventional bottle openers. By this arrangement a particularly sensitive effortless removal of the crown cap is permitted without any significant deformation so that the removed crown cap may be re-used again as temporary closure.

Additionally, the punched-out plate area 8 provides a massive reinforcement for the bottom 4 of the housing adapted to absorb reaction forces and prevent deformation or damage to the plastic housing during manipulation of the opener. Furthermore, due to the opposed direction of the prying and reaction forces during crown cap removal on prong 12 and plate area 8 respectively distortion or removal of plate 2 from housing 1 is effectively prevented. It shall also be noted that the area of frame remnant 9 of plate 2 from which prong 12 extends is relatively large so as to further stabilize prong 12 and prevent distortion of plate 2.

The remaining portion of the opening 7 in plate 2 steadily decreases in width in longitudinal direction towards the end opposite the prong 12 whereby the sides of the opening converge towards each other along an included angle α (FIG. 1). The housing side wall 5 as will be noted in this portion of the device extends parallel to the sides of the opening to provide a housing portion of constantly decreasing width and which retains the resilient pad 3. Pad 3 is preferably in the form of a circular disk made of rubber or other suitable resilient material. Pad 3, in assembly, underlies the portion of the plate opening which is of decreasing width and is retained in that position by being wedged against the converging sides of the housing as shown. When it is desired to temporarily reclose a previously opened bottle the bottle neck is moved into the opening 7 and the device is then displaced longitudinally to bring the bottle neck in wedging engagement with the converging sides of the opening. The frame remnant 9 of the plate 2 extends thereby under the rim of the bottle neck causing the open mouth of the bottle to be moved into sealing engagement with pad 3. The device of the invention by wedging engagement with the bottle neck will now be temporarily secured upon the open bottle for sealing reclosure of the opening thereof. The pressure forces occuring during reclosure usage of the present device in a direction normal to plate 2 and bottom 4 will be effectively absorbed by [1] the resiliency of pad 3 and [2] the bottom reinforcement provided by punched-out plate area 8 so as to prevent any possible distortion or other damage to the plastic housing of the device.

One of the particular features of the invention resides in the fact that the resilient reclosure pad 3 does not need to be permanently fastened in the housing, the pad 3 being normally retained in position in the housing by means of wedging engagement between the converging side walls of the designated portion of the housing. By this closure pad 3 can be easily removed from the housing for cleaning or interchanged with a new pad if necessary.

A more significant and important feature of the invention resides in the following: At least one longitudinal side of the plate opening 7 is provided with a plurality of projections 14 preferably in the form of teeth. These teeth project inwardly of the opening from the frame remnant 9 of plate 2 at a location immediately adjacent the broadest portion of the opening and extend for a distance along an angularly converging side as shown.

The teeth 14 are adapted for meshing engagement with the external serrations normally provided on twist-off type bottle caps. To this effect the present device is utilized in the following manner: The device is positioned so as to permit the twist-off cap to extend through the broadest portion of plate opening 7 into housing 1. By movement of the twist-off cap towards the inwardly converging portion of the opening at least some of the teeth 14 are brought into engagement with the serrations on the twist-off cap by which then, during respective rotation of the device, the twist-cap can be easily sheared off from the retaining ring without undue clamping forces being applied to the cap, as when using a pair of pliers.

It will be noted that the width of opening 7 in the area of the teeth and consequent gradual converging reduction in width of the opening accommodates substantially all conventional sizes of twist-off caps assuring secure operational engagement with any number of teeth. Although the opposite longitudinal side of opening 7 may likewise be provided with a similar tooth arrangement, this is not required and may even, in certain instances, interfere with proper application of the device and in general results in unnecessary increase in the product cost. Thus, as herein proposed the toothless side of opening 7 provides a sufficient reaction support for the twist-off cap during rotational removal of the latter. By elimination of teeth projections along the opposite side of the opening it will also be assured that the present device can be properly utilized as a reclosure for previously opened bottles without hindrance by the teeth projections.

The present device can be utilized to accomplish relatively effortless rotational lossening of twist-caps having varying diameters. Thus by moving the device across the twist-cap in a direction towards the gradually reduced width of opening 7, the twist cap of any diameter will be wedged between the converging sides of opening 7 for clamping engagement therein. The clamping force can be adjusted according to the degree of movement of the device so as to accommodate any type of twist-off cap construction, some of which may be more difficult to remove than others.

Preferably, it is of advantage to have the sides of opening 7 converge at an included angle of from 14° to 16° (FIG. 1) which substantially approximates the frictional self-locking capability between the materials of the cover plate 2 (stainless or plated steel) and the twist-off cap (sheet metal). By this, the soft but secure clamping capacity of the device is further increased without danger of detrimental deformation of the twist-off cap which obviously would hinder removal.

Advantageously, the teeth 14 are of receeding dimension and spacing in direction from the broad portion of opening 7 towards the gradually converging portion of the opening. By this any type of serrations around the twist-off cap, which may be of different depths and spacings, can be accommodated.

With reference to the embodiment illustrated in FIG. 6 the internal surface of the circumferential side wall 5 of housing 1 is provided with an integral circumferential rim or ledge 6 from which extend a plurality of spaced projections 6a adapted for operational engage-

ment with the serrated surface of a twist-off cap in the manner of the teeth **14** in FIGS. **1** to **5**.

The ledge and projections **6,6***a* are preferably spaced a vertical distance below the edge of circumferential side wall which corresponds substantially to the thickness of cover plate **2** in assembly, the remnant frame portion **9** (FIG. **1**) will be flatly supported on ledge and projections **6, 6**a in FIG. in substantially flush planar position across the front opening of housing **1**.

If desired, cover plate **2, 9** may be adhesively bonded to the ledge and projections **6, 6***a*, although this is normally not necessary since in assembly the cover plate **2, 8, 9** will be securely clamped in housing **1** by means of punching out and offsetting plate area **8** relative to the remnant frame portion **9** of plate **2**.

As a further feature of the embodiment illustrated in FIG. **6**, some of the projections **6**a are longer than the remainder of the projections and no projections are provided in designated opposite locations along the converging sides of housing **1**. By this arrangement, the resilient reclosure pad **3** will be removably retained against movement in one direction by tangential wedging engagement between the projectionless converging portions of side wall **5** and retainment against movement in the other direction by the longer projections **6***a*.

From the foregoing it will be obvious that the present novel device embodies certain distinct advantages over the prior art as summarized in the following:

A distinct feature of the invention resides in that the metallic cover plate of the device is provided with a single opening shaped such as to be simultaneously utilized as a crown cap and twist-off cap opening and bottle reclosure member without any apparent danger of incorrect usage of the device during any of these functions.

The opening is punched-out of the cover plate and comprises most of the central area of the plate to leave only a remnant frame portion adjacent the sides of the box-like device. The opening in the plate has a shape substantially corresponding to the planar configuration of the device. The punched-out central portion of the plate is not completely severed but remains connected to the plate by means of ribs which form the primary support for the plate. In assembly of the device, the punched-out metallic portion is compressed inwardly of the housing of the device for parallel abutment upon the bottom of the housing and thus forms a rigid reinforcement for the bottom of the housing which is usually made of a light-weight plastic material. By this, the connecting ribs are angularly displaced from the plane of the plate to provide substantially rigid supporting struts between the remnant frame portion of the plate and the punched-out portion of the plate which rests on the bottom of the housing. Although the cover plate respectively the punched-out portion and/or remnant frame portion of the plate may be bonded or otherwise fastened in the housing of the device this is not necessary since the punched-out metal plate during assembly operation of the device, i.e. punching, will be securely locked in the plastic housing by means of displacement of the punched-out portion and connecting ribs.

The above-described construction of the present improved device is not only economical in production but simultaneously provides metallic reinforcement for the plastic housing at defined locations which represent areas of maximum stress applications.

Accordingly, since the bottom of the plastic housing in the present device is reinforced over most of its area by means of the displaced, punched-out, metallic plate portion, none or only little mechanical stresses will be imposed upon the plastic bottom of the housing of the device so that the wall thickness and material composition of the housing can be selected without consideration to stress resistant capacity.

Additionally, the longitudinal and transverse spaced connecting ribs between the cover plate and the punched-out portion of the plate, provide advantageous strut-type support for the remnant frame portion of the cover plate. The connecting ribs are disposed such as to provide maximum support at opposite longitudinal ends of the opening and particularly at that end which serves as crown-cap remover. At this area the connecting ribs are maintained at maximum possible widths for increased rigidity. The connecting ribs as described and shown are disposed in a direction normal to the bottom of the device and are dimensioned such that the punched-out portion of the plate opening will be positioned flatly on the bottom of the device whereas the remnant frame portion of the plate is disposed in parallel spaced relationship across the front opening of the device flush with the circumferential edge of the side wall thereof.

As further proposed herein, the side wall of the device may be provided with a ledge or with spaced inwardly extending projections at a distance below the edge of the side wall corresponding to the thickness of the cover plate. Preferably, the side wall projections are in the form of integral ribs extending towards the bottom of the device. The ribs or projections are adapted to support the remnant frame portion of the cover plate of the device which may be adhesively bonded thereto if desired. These ribs or projections along the inside of the side wall provide a sufficiently large support area for the remnant frame portion of the cover plate around the opening so that during manipulation of the present device the occurring reaction forces will be distributed over a relatively large support area for transfer to the plastic housing of the device.

As additionally proposed, some of the supporting ribs or projections along the inside of the housing wall may be of longer dimensions than the other and along certain lengths of the side wall the projections may be omitted altogether or gradually reduced in length. This combined arrangement permits wedging retainment of the resilient reclosure pad within the housing so as not to be inadvertently dislodged from its predetermined position beneath the selected portion of the plate opening. This eliminates the disadvantage of permanent attachment of the reclosure pad known from the prior art and permits removal of the pad for cleaning or interchange.

The improved bottle opener according to the present invention is considerably simpler in construction and less expensive to produce than known bottle openers of this type since only one opening is provided in the metallic cover plate instead of two spaced openings. This effectively eliminates the relatively weak intermediate plate portion between the openings which in the known device is subjected to extreme reaction forces causing deformation and subsequent breakage of this plate portion. Additionally by predetermined shaping of the opening in the present device incorrect usage of the device is effectively prevented.

Furthermore, in the present device the operational forces during manipulation of the device are effectively absorbed by the relatively large surface area of the remnant frame portion of the cover plate, which is supported by the displaced strut type connecting members or which may otherwise be made of more solid construction to withstand the relatively large bending forces.

The primary feature of the invention, however, resides in the provision of integral means in association with the opening in the cover plate of the present device which permits easy and relatively effortless removal of twist-off type caps in addition to removal of crown caps and temporary reclosure of opened bottles. This was not possible in the hitherto known devices.

These three functions are made possible by properly shaping and dimensioning the opening in the cover plate as well as portions of the housing of the device, which makes an incorrect usage of the device practically impossible.

A further distinct advantage of the invention from an economical point of view resides in the fact that the three individual parts of the device, i.e. Plastic housing, metallic cover plate and resilient closure can be obtained from different vendors. Thus, the plastic housing can be made by a manufacturer supplying plastic moldings or extrusions and may be variously colored and marked with impressions or the like and as desired by the customer, whereas the metallic cover plate may be supplied by a producer of stampings. This, obviously, considerably reduces production and assembly cost of the device.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can by applying current knowledge readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention and, therefore, such adaptations should and are intended to be comprehended within the meaning and range of equivalence of the following claims.

What is claimed as new and desired to be protected by Letters Patent is set forth in the appended claims:

1. A combination bottle opener and reclosing device comprising an elongated flat box-like housing having an open front side; a metal cover plate disposed across said open front side of said housing and attached thereto, said cover plate having an elongated aperture adapted to receive the throat of a bottle with a cap thereon; prong means integral with said cover plate and projecting from one end of said aperture into the latter for gripping engagement under the edge of a crown cap normally closing the throat of a bottle received in the aperture; bottle cap gripping means projecting inwardly from a longitudinal edge of said aperture for engagement with a twist off type bottle cap; and reclosure means in said housing in the region of the other end of said aperture for reclosing the bottle after removal of said cap.

2. A device as defined in claim **1,** wherein said elongated aperture extends longitudinally over a major portion of said cover plate.

3. A device as defined in claim **2** wherein said aperture has two longitudinally extending portions, one of which has a length which is only a small fraction of the length of the other portion and each of which tapers towards the respective end of said aperture.

4. A device as defined in claim **3,** wherein said aperture has concavely curved longitudinal side edges.

5. A device as defined in claim **3,** wherein said prong means project from the transverse edge of the aperture at the end of the shorter aperture portion.

6. A device as defined in claim **5,** wherein Said transverse edge of said aperture at the end of said shorter aperture portion is considerably wider than the opposite transverse edge thereof.

7. A device as defined in claim **6,** wherein said prong means projects substantially centrally from said wider transverse edge of said aperture.

8. A device as defined in claim **7,** wherein said prong means has in top view a substantially rectangular configuration.

9. A device as defined in claim **8,** wherein said prong means has an operating edge facing away from said wider transverse edge of said aperture, said operating edge being concavely curved.

10. A device as defined in claim **1,** wherein said bottle cap gripping means comprise a plurality of adjacent teeth projecting from a longitudinal edge of said aperture into the latter.

11. A device as defined in claim **10,** wherein the longitudinal edge of said aperture opposite said one longitudinal edge is smooth, and wherein said longitudinal edges include an angle with each other which forms a self-locking angle for a cap wedged between said edges.

12. A device as defined in claim **10,** wherein said aperture has a pair of opposite transverse edges one of which is considerably wider than the other, and wherein said teeth of said gripping means project from a portion of said one longitudinal edge which is adjacent to said wider transverse edge.

13. A device as defined in claim **12,** wherein the size and pitch of said teeth gradually decrease in the direction toward said smaller transverse edge of said aperture.

14. A device as defined in claim **1,** wherein said cover plate has a portion corresponding substantially in outline to that of said aperture, said portion being offset with respect to the remainder of said cover plate and integrally connected thereto by a plurality of connecting ribs.

15. A device as defined in claim **14,** wherein said housing has a rear wall opposite said open front side thereof, and wherein said off-set portion of said cover plate is substantially parallel to and abuts against said rear wall.

16. A device as defined in claim **15,** wherein said connecting ribs are substantially normal to said cover plate and said off-set portion thereof.

17. A device as defined in claim **14,** wherein said housing has a peripheral wall, and including short support portions projecting inwardly from said peripheral wall and serving to support a peripheral portion of said cover plate.

18. A device as defined in claim **17,** wherein said support portions comprise a plurality of closely adjacent substantially parallel supporting ribs extending substantially normal to said rear wall of said housing integral with said peripheral wall.

19. A device as defined in claim **18,** wherein said supporting ribs end short of the edge of said peripheral wall of said housing for a distance substantially equal to the thickness of said cover plate.

20. A device as defined in claim 19, wherein said reclosure means comprises a substantially circular rubber disk and wherein said supporting ribs in the region of said other end of said aperture project to a different degree inwardly from said peripheral wall so that said rubber disk may be clamped between ribs projecting from opposite sides of said peripheral wall.

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