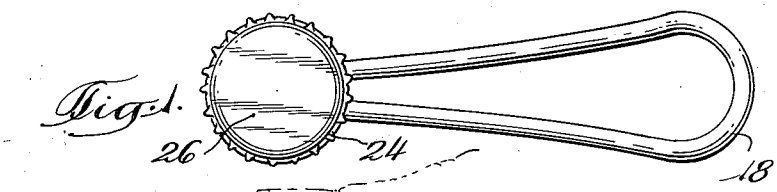
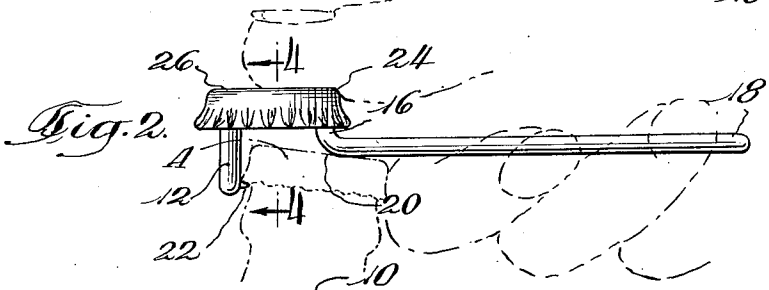
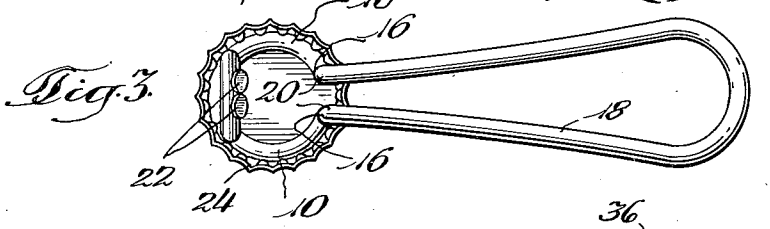
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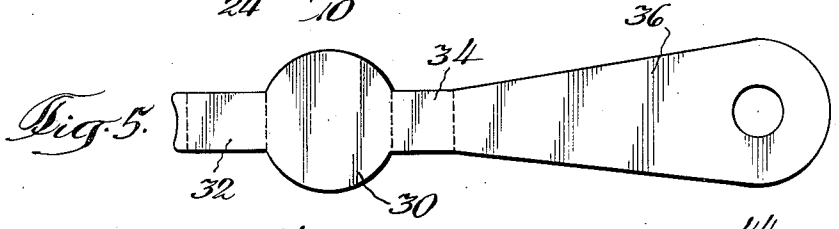
FULCRUM TYPE BOTTLE CAP LIFTER

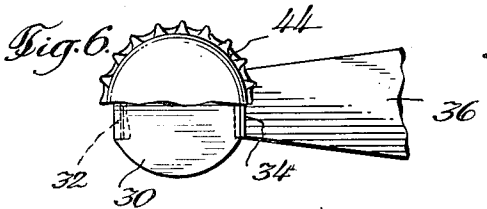
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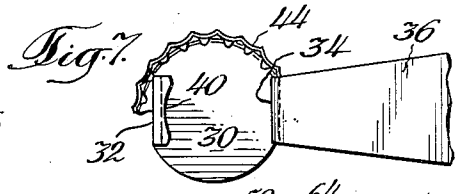


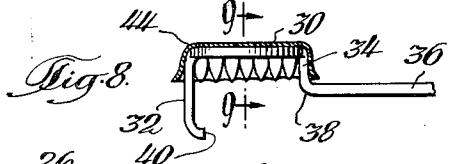


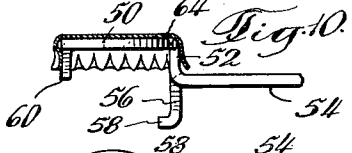


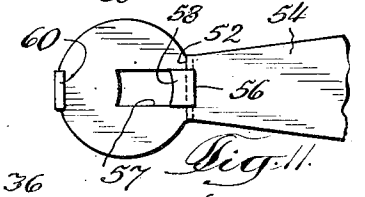


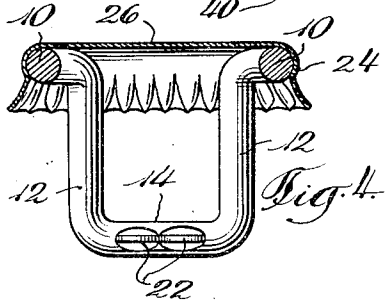


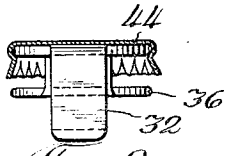












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Attorneys

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UNITED STATES PATENT OFFICE

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FULCRUM TYPE BOTTLE CAP LIFTER

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8 Claims. (Cl. 81—3.46)

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This invention relates to bottle openers of the type designed for prying off a bottle cap of the familiar "crown" type. One object of the invention is to provide a simple structure economical to manufacture and of attractive appearance.

Another object of the invention is to provide a bottle opener adapted to serve also as an advertising device and for that purpose provided with a display surface which is prominently exposed when the device is in a position for use.

It is also an object of the invention to provide a bottle opener adapted particularly to be made of bent wire and having a body outline to which a display panel may be attached to render the device suitable for display or advertising purposes in addition to serving its mechanical function as an opener.

More specifically, the invention provides a simple form of bottle opener constructed preferably of heavy bent wire stock and having a portion formed to receive a crown cap which provides a suitable flat area for display purposes, said cap being located in a position to afford a bearing surface for the thumb of the user in the operation of the opener.

Other objects and advantages of the invention will appear from the following description taken in connection with the drawings, in which:

Fig. 1 is a top plan view of the bottle opener embodying this invention;

Fig. 2 is a side elevation of the same;

Fig. 3 is a bottom plan view of the opener shown in Figs. 1 and 2;

Fig. 4 is a transverse sectional view taken as indicated at line 4—4 on Fig. 2 and on a larger scale;

Fig. 5 is a top plan view of a blank of sheet metal for the construction of a modified form of opener embodying the invention;

Fig. 6 is a fragmentary top plan view of said modified form of the invention with parts broken away;

Fig. 7 is a fragmentary bottom plan view of the same;

Fig. 8 is a side elevation of said modified form, with a bottle cap applied thereto and shown in section;

Fig. 9 is an end elevation of the device shown in Fig. 8 but with the cap shown in section as indicated at line 9—9 on Fig. 8;

Fig. 10 is a side elevational view similar to Fig. 8 showing another modification of the invention;

Fig. 11 is a bottom plan view of the form shown in Fig. 10.

For the removal of the conventional crown cap it is necessary to provide means which will apply force to the lower edge of the depending skirt or flange of the cap in a direction to withdraw the cap from the neck of the bottle. The opener to which this invention relates is provided with means to engage the lower edge of the bottle cap and with means spaced therefrom to serve as a fulcrum resting upon the top of the bottle cap near one side thereof, together with a handle extending rigidly in a lateral direction, preferably in the plane of the bottle cap. As shown in Figs. 1 to 4, such a device is formed of heavy wire stock bent to provide a pair of spaced arcuate portions 10, 10 which may be referred to as the body of the tool and from which there depend the bars 12, 12 which are connected at their lower ends by an integral crossbar 14 seen most clearly in Fig. 4. At the other side of the body formed by the curved parts 10, 10, the wire is bent downwardly at 16, 16 and thence laterally in the form of an elongated loop 18 which constitutes the handle.

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The right angle bends at 20, 20 which are the junctions between the handle 18 and the two vertical parts 16, 16 provide a fulcrum at which the tool bears upon the top surface of the cap indicated in dotted outline at "A" in Fig. 2 when the tool is placed in position for use. The crossbar 14 has a pair of nibs or lugs 22, 22 pressed from the material in a position to extend just under the skirt or flange of the cape "A" as seen in Fig. 2 and with the tool in this position the handle 18 extends with its under surface substantially in the plane of the top of the bottle cap "A." With the tool thus applied it will be evident that downward pressure upon the handle 18 will rock the opener about the fulcrum at 20, 20 so as to pry the cap "A" from the bottle neck at one side, thus releasing its grip upon the bottle so that it can be readily removed.

The bent wire form thus far described might be used to perform this operation, but preferably there is added to the bent wire form a thumbpiece which may be in the form of a typical crown cap 24 pressed onto the arcuate body members 10, 10 as shown in the drawings. The cap 24 thus presents an upwardly exposed flat surface 26 which is conveniently positioned to serve as a bearing area for the thumb of the user when the handle of the opener is grasped by the fingers in a natural position. When the thumb is thus located upon the top surface 26 of the cap 24, the opener will be easily and naturally operated and will be handled with better control than if it were held otherwise in the hand.

In addition to serving as a thumbpiece, the cap **24** provides a flat surface of substantial area which may be decorated if desired but which will usually carry an advertising message such as a trade name or slogan. Since in the position of use the surface **26** of the cap **24** is disposed upwardly and since in placing the opener over a bottle cap the user will almost always look directly at this portion of the tool which is to be applied to the bottle cap, the advertising message carried by the surface **26** will be advantageously displayed and repeatedly noticed or subconsciously noted so as to have the desired cumulative effect in impressing the trade name or slogan upon the memory. It will be evident that the display surface for this purpose need not be provided by a conventional or typical bottle cap but that a disc of any suitable material may be clinched onto the body portion of the tool in place of the bottle cap illustrated in the drawing.

Fig. 5 and the remaining views of the drawing show structures adapted to be manufactured from sheet metal instead of from bent wire. The blank shown in Fig. 5 includes a substantially circular body portion **30** having a lug **32** at one side and a neck portion **34** extending from the opposite side and connecting the body portion **30** with the handle **36**. As seen in Fig. 8, the part **32** is bent downwardly at right angles to the circular body portion **30** and the part **34** also is bent downwardly while the handle **36** extends horizontally in a plane parallel to that of the body **30**. The right angle bend at **38** forming the junction between the part **34** and the handle **36** provides the fulcrum which is to rest upon the bottle cap, and the lug **32** is formed with a terminal nib **40** adapted to engage under the flange of the bottle cap which is to be removed.

The substantially circular body portion **30** provides a flat upwardly exposed surface which may be directly decorated or printed so as to serve as a display surface for advertising matter and it also may perform the mechanical function of a bearing area for the thumb in the same manner as the cap **24** serves in the bent wire structure. However, if desired, a conventional crown cap **44** may be crimped onto the body portion **30** of this opener; a portion of such a cap is shown thus positioned in Figs. 6 and 7 and said cap **44** is shown in section in Figs. 8 and 9.

Figures 10 and 11 show another form of opener made from sheet metal in which the body portion **50** has a connected arm **52** extending downwardly therefrom at one side with a horizontally extending handle portion **54** bent laterally therefrom. A lug **56** extends downwardly below the plane of the handle **54** and is formed with a nib **58** at its lower end adapted to engage under the edge of a bottle cap. The stock for the lug **56** is obtained by cutting it from the area of the body **50** and the portion **52**, leaving an opening **57** in the body, as seen in Fig. 11, and, in effect, bifurcating the part **52** throughout its length. At the opposite side of the body **50** a depending lug **60** serves as the fulcrum to bear on the top surface of a bottle cap when the nib **58** is engaged under the flange of the cap at the opposite side for prying it loose from the bottle neck. In this form of the device, as in the others, a standard bottle cap **64** may be crimped over the body **50** to give the device an ornamental appearance and to provide an upwardly exposed flat surface which may be used for the display of advertising matter if desired. It will be evident, however, that if the cap **64** is omitted, the top surface of the body **50** may be decorated in any desired manner and may carry an advertising message.

In all forms of the invention herein shown it will be noted that the tool as a whole is relatively flat, the working parts being confined to the vicinity of the plane of the handle which represents the main bulk of the article; it can be conveniently stored with other utensils in a drawer or can be hung on a hook when not in use. While there are shown and described herein certain structures embodying the invention and illustrative thereof, it is to be understood that the invention is not limited thereto or thereby but embraces all modifications, variations and equivalents coming within the scope of the appended claims.

I claim:

1. A bottle cap remover comprising a body portion having a first part depending therefrom to fulcrum on a bottle cap, a second part spaced from the first and depending from said body portion to extend past the cap and adjacent its periphery, said second part being formed to engage under the edge of the flange of said cap, a handle extending from said body in a direction substantially parallel to the plane of the top of said cap, and a bottle cap crimped over the body portion and providing a reinforcement for the body portion and a smooth bearing surface of enlarged area relative to the adjacent portions of the cap remover for engagement by the thumb of the user.

2. A bottle cap remover formed of bent wire and comprising a pair of spaced bars adapted to extend in a plane approximately parallel to the top of a bottle cap and above it, said bars being bent downwardly at one end and joined by a cross bar portion, means on said cross bar portion for engaging under the edge of the flange of said bottle cap, the other ends of said bars being bent downwardly substantially parallel to said bent bars and at a point spaced from said bars a distance slightly less than the diameter of the cap to engage the top of said cap and thence extending laterally to form a handle to lie approximately in the plane of the top of the cap, the bent portions of the bars at the junction of said handle with the downwardly extending portions of the bars providing a fulcrum to bear on the top of the cap at a distance from the side at which the said cross bar portion engages the flange of the cap.

3. In a bottle cap remover as defined in claim 2, said spaced bars being oppositely bent into concentric, arcuate form, having an external diameter substantially conforming to the internal diameter of a crown cap to adapt the same for receiving a crown cap.

4. A bottle cap remover comprising a body including a circular portion of external diameter substantially conforming to the internal diameter of a crown cap to adapt the same for receiving a crown cap, substantially diametrically opposite depending portions on said circular body portion one of which forms a fulcrum for engaging the top of a bottle cap when the opener is in operative position and the other of which is of length sufficient to extend below the bottom edge of a bottle cap when the remover is in operative position, means adjacent the lower end of said second depending portion for engaging under the bottom edge of a cap flange when the remover is in operative position, and a handle forming part extending from one of said depending portions in a plane substantially

parallel with the plane of the circular body portion.

5. A bottle cap remover comprising a body including a circular portion of external diameter substantially conforming to the internal diameter of a crown cap to adapt the same for receiving a crown cap, a depending portion on said circular portion, a handle forming part on said depending portion extending substantially parallel to the plane of said circular portion, a second depending portion on said circular portion substantially diametrically opposite the first mentioned depending portion and of length greater than the first mentioned depending portion by an amount approximating the height of a crown cap, and means adjacent the lower end of the second depending portion for engaging under the bottom edge of a cap flange when the remover is in operative position.

6. A bottle cap remover comprising a body portion having a first part depending therefrom to fulcrum on a bottle cap, a second part spaced from the first and depending from said body portion to extend past the cap and adjacent its periphery, said second part being formed to engage under the edge of the flange of said cap, a handle extending from said body adjacent the second part in a direction substantially parallel to the plane of the top of said cap, and a bottle cap crimped over the body portion and providing a reinforcement for the body portion and a smooth bearing surface of enlarged area relative to the adjacent portions of the cap remover for engagement by the thumb of the user.

7. A bottle cap remover formed of sheet metal and comprising a body including a circular portion of external diameter substantially conforming to the internal diameter of a crown cap to adapt the same for receiving a crown cap, substantially diametrically opposite depending portions on said circular body portion one of which forms a fulcrum for engaging the top of a bottle cap when the opener is in operative position, and

the other of which is of length sufficient to extend below the bottom edge of a bottle cap when the remover is in operative position, said latter depending portion having a terminal nib at its lower end to engage the bottom edge of a bottle cap flange when the remover is in operative position, and a handle rigid with said body and extending from one of said depending portions in a plane substantially parallel with the plane of the circular body portion.

8. A bottle cap remover formed of sheet metal and comprising a circular body portion of external diameter substantially conforming to the internal diameter of a crown cap to adapt the same for receiving a crown cap, a conventional crown type bottle cap secured over said body portion, said body portion being provided with a first lug depending from one side of said body, said lug having a terminal nib bent to engage under the edge of a bottle cap flange, and a second lug shorter than the first lug depending from the opposite side of said body to rest on the top of the bottle cap as a fulcrum, together with a handle rigid with said body and extending therefrom in a direction approximately perpendicular to the axis of the bottle cap.

RAY C. DREIER.

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