Sept. 24, 1935. E. O. LOEBER 2,015,565

DEVICE FOR OPENING TOPS OF BOTTLES AND JARS

Filed Sept. 7, 1933

Fig. 1.

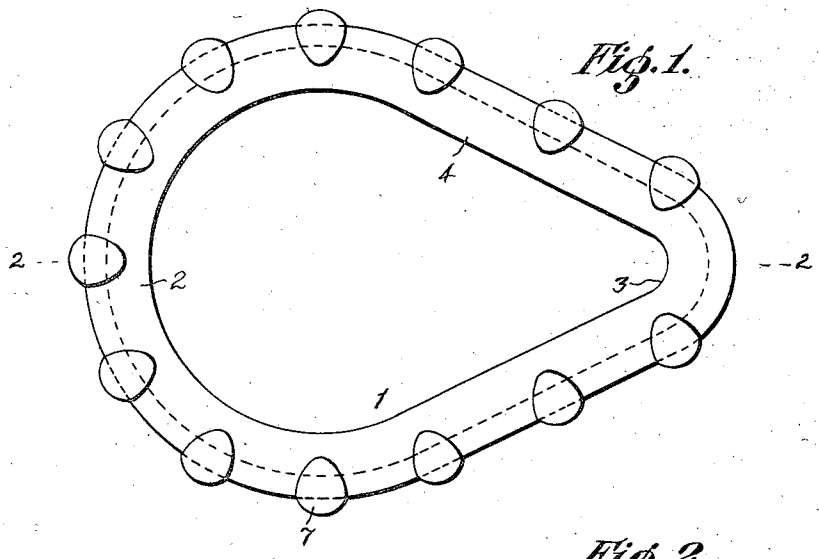


Fig. 2.

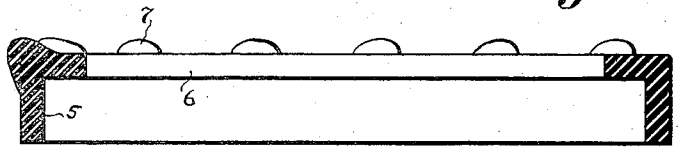


Fig. 3.

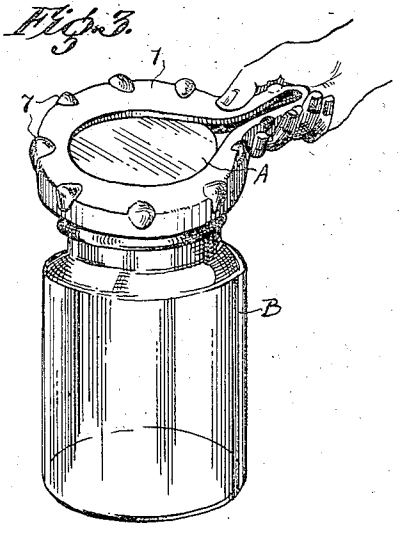
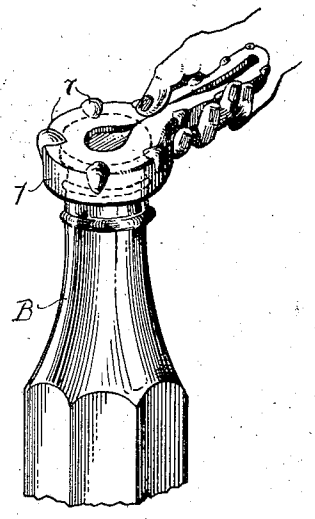


Fig. 4.



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UNITED STATES PATENT OFFICE

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DEVICE FOR OPENING TOPS OF BOTTLES AND JARS

Edgar O. Loeber, Cleveland, Ohio, assignor, by direct and mesne assignments, of one-half to The Rulo Company, Cleveland, Ohio, a corporation of Ohio, and one-half to Robert H. Jamison, Cleveland, Ohio

Application September 7, 1933, Serial No. 688,473

6 Claims. (Cl. 81—3.1)

This invention relates to a device for removing the tops of bottles, jars and the like, more particularly tops which are screwed on and off of the side walls of the tops frictionally engage the sides of the bottle, jar or other receptacle.

Devices of this character heretofore made, of which I have knowledge, were annular in shape and therefore adapted to fit upon receptacle tops of a predetermined size. Accordingly, their use was limited to tops of a certain diameter. Furthermore, the capability of such a device to grip a top was dependent upon the strength of the user to compress the device into engagement with the top, so that this strength was utilized in forcing the side walls of the device against the side walls of the top in opposition to the resiliency of the device itself. If the top was screwed on tightly, the user was unable to loosen the top due to the extra exertion required to turn the top in addition to the compression of the device. The capability of the device was greatly reduced because it only engaged the top at spaced points, that is, opposite those portions where the user's fingers and palm engaged the side walls of the device and the user could effect but little leverage on the top to turn it.

One object of the invention is to provide a device of this character formed of elastic material adapted to fit tops of varying sizes.

Another object of the invention is to provide an elastic device of this character so shaped that a section or portion of it may be stretched around a large portion of a bottle cap and have continuous or unbroken engagement therewith throughout such portion and the other portion may be used as a handle.

Another object of the invention is to provide a device of this character formed of elastic material and so shaped that it may effectively engage a large portion of the top without undue exertion and form a handle whereby the top may be readily turned.

A further object of the invention is to provide a device of this character that is relatively simple in construction, readily and economically made and readily applied to tops the sizes of which vary greatly in diameter.

Other objects of the invention will be apparent to those skilled in the art to which my invention relates from the following description taken in connection with the accompanying drawing, wherein

Fig. 1 is a plan view of a device embodying my invention.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a perspective view showing the operation of removing a relatively large bottle cap.

Fig. 4 is a perspective view showing the operation of removing a small sized bottle cap.

In the drawing, 1 indicates as an entirety the device for removing caps A from bottles B. It comprises an endless elastic member molded from rubber or rubber compound, and shaped to provide end walls 2, 3, curved on different radii and converging side walls 4. In this arrangement, or shape, the member is elongated in the direction of a line cutting the axes about which the end walls are curved. This form of construction permits the larger curved end 2 to readily adapt itself to caps A of large size and the other curved end 3 to readily adapt itself to relatively small caps. By elongating the member, the end portion opposite the end wall when the latter is engaged with a cap, extends away from the cap and serves as a handle. As the member is formed of elastic material the extended side portions may be compressed together and in such action the curved end wall engaging the cap is bound to and stretched around a large portion thereof, thereby insuring an unbroken engagement with the cap. The end and side walls are shaped to provide sides 5 and an inwardly extending flange 6 which extends over the top of the cap. The inner surfaces of the sides and flange are smooth. Thus it will be seen that the end wall 2 or 3, frictionally engages the side of the cap throughout the entire engaged area. When the device is engaged with a cap, that portion which is to serve as a handle enables the person to stretch or expand the end wall engaging the cap and to then grip the end portions tightly together, while maintaining the end wall stretched, thereby effecting a tight binding action on and circumferentially of the cap, whereby it may be readily turned without danger of slippage. The outer surfaces of the flange and sides may be provided with spaced projections 7 to facilitate gripping of the device.

When the device is applied to a cap A, turning force may be effected in either direction, so that the device may be used to tighten a cap on a bottle or to remove it.

To those skilled in the art to which my invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the spirit and scope of the invention. My disclosures and the description herein are purely illustrative and are not intended to be in any sense limiting.

What I claim is:

1. A device for removing caps from containers comprising a hollow, normally elongated member formed of elastic material and having end walls curved on different radii and converging side walls integrally connected to said end walls, the inner surfaces of said end walls and side walls being smooth throughout their entire area.

2. A device for removing caps from containers comprising a hollow, normally elongated member formed of elastic material and having end walls curved on different radii and converging side walls integrally connected to said end walls, said walls being shaped to form a continuous vertical portion and an inwardly extending flange.

3. A device for removing caps from containers comprising a hollow, normally elongated member formed of elastic material and having end walls curved on different radii and converging side walls integrally connected to said end walls, said walls being shaped to form a continuous vertical portion and an inwardly extending flange, the inner surface of said vertical portion being smooth throughout its entire area.

4. A unitary device for removing tops of jars and bottles formed of a continuous section of flexible rubber shaped to provide a hollow, normally elongated member having side walls which converge relative to the major axis of said member and arcuate end walls of different radii connecting the corresponding opposite ends of said side walls, said side walls permitting expansion of either end wall to engage tops having a larger diameter than the normal diameter of said end wall.

5. A unitary device for removing tops of jars and bottles formed of a continuous section of flexible rubber shaped to provide a hollow, normally elongated member having side walls which converge relative to the major axis of said member and arcuate end walls of different radii connecting the corresponding opposite ends of said side walls, said side walls permitting expansion of either end wall to engage tops having a larger diameter than the normal diameter of said end wall and the inner surface of each of said end walls being smooth to provide a continuous gripping surface.

6. A unitary device for removing tops of jars and bottles formed of a continuous section of flexible rubber shaped to provide a hollow, normally elongated member having side walls which converge relative to the major axis of said member and arcuate end walls of different radii connecting the corresponding opposite ends of said side walls, said side walls permitting expansion of either end wall to engage tops having a larger diameter than the normal diameter of said end wall and the inner surfaces of said side and end walls being smooth to provide a continuous gripping surface.

EDGAR O. LOEBER.