

April 21, 1925.

1,534,211

T. C. HAMILTON
BOTTLE CAP PULLER

Filed Sept. 18, 1924

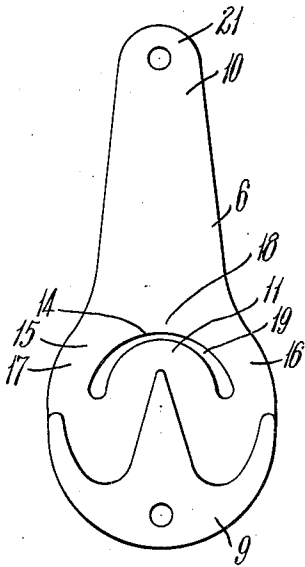


Fig. 3.

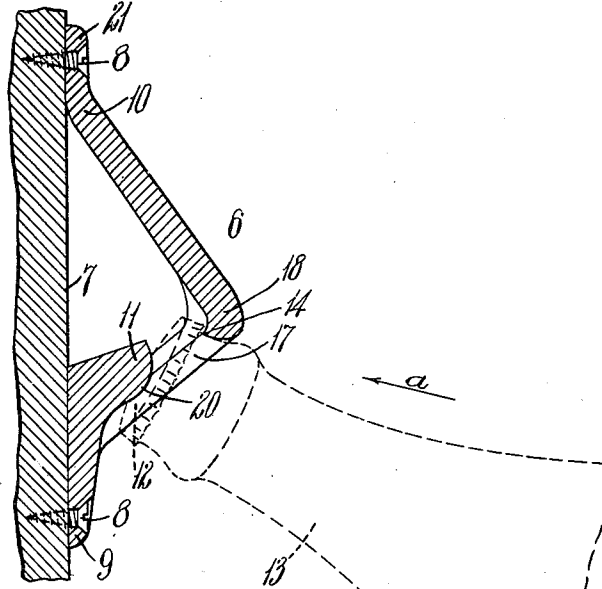


Fig. 1.

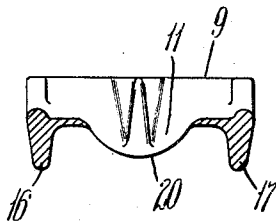


Fig. 4.

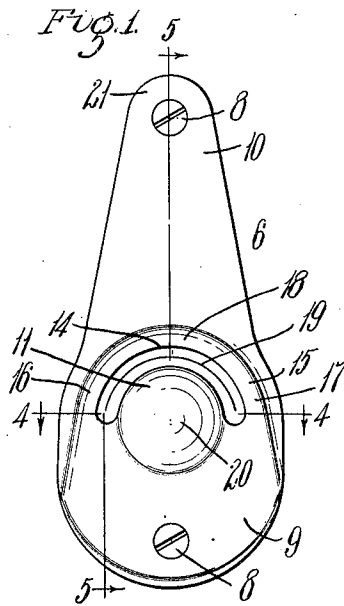


Fig. 2.

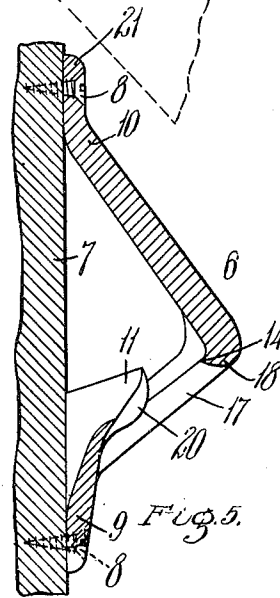


Fig. 5.

Inventor:
Thomas C. Hamilton,
by his attorney,
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UNITED STATES PATENT OFFICE.

THOMAS C. HAMILTON, OF BOSTON, MASSACHUSETTS.

BOTTLE-CAP PULLER.

Application filed September 18, 1924. Serial No. 738,385.

To all whom it may concern:

Be it known that I, THOMAS C. HAMILTON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Bottle-Cap Pullers, of which the following is a specification.

This invention relates to a cap puller for bottles and the form of my invention disclosed in the following specification and in the drawings is particularly adapted to be fastened to a stationary support, although I do not wish to be understood as limiting my invention to this particular embodiment thereof.

Broadly, the cap puller of my invention embodies two contact portions, one of these contact portions is adapted to engage a portion of the under edge of a cap of a bottle. The other contact portion is adapted to simultaneously engage the central portion only of the bottle cap, that is, that portion of the bottle cap which is in alignment with the bore of the bottle neck.

In bottle cap pullers heretofore constructed, the contact portion which bears against the cap projects entirely thereacross and bears against the cap above the edges of the neck of the bottle, resulting in a pressure being brought to bear upon the neck of the bottle when the cap is being removed, which causes the same to chip, crush, or break.

It is one of the particular objects of this invention, therefore, to provide a bottle cap puller which will not chip or break the neck of the bottle, and this object is attained in the device of my invention by so constructing the same that the fulcrum against which the cap presses, or which is pressed against the cap, is positioned in the central portion only of the cap, and does not press on the cap above or in alignment with the neck thereof.

The invention consists in a cap puller embodying the construction set forth in the following specification and particularly pointed out in the claims.

Referring to the drawings:

Figure 1 is a vertical sectional elevation illustrating my improved bottle cap puller attached to a stationary support, a portion of a bottle being shown in dotted lines in the position in which it is placed when it is desired to remove a cap therefrom.

Fig. 2 is a front elevation as viewed in the direction of the arrow *a*, Figure 1.

Fig. 3 is a rear elevation view from the left of Figure 1.

Fig. 4 is a section taken on line 4—4, Figure 2.

Fig. 5 is a sectional elevation taken on line 5—5, Figure 2.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 6 is the bottle cap puller of my invention illustrating the same as positioned upon a fixed support 7, to which it is attached by screws 8 which project through a base 9 and the upper end of an arm 10. The base 9 has an ear 11 thereon which constitutes one contact portion of the cap puller, this portion constituting a fulcrum against which the cap 12 of a bottle rests when the cap is being removed from the bottle. The cap puller embodies another contact portion 14 which constitutes a lip provided upon the lower edge of an inverted U-shaped portion 15. The U-shaped portion 15 projects upwardly and outwardly from the base 9 and consists of two arms 16 and 17 connected together by an arched cross piece 18.

An inverted U-shaped opening 19 is provided in the cap puller and extends partly around the ear 11 and within the U-shaped portion 15, thus providing an opening into which a portion of the cap 12 projects when the same is being removed from the bottle. The under face 20 of the ear 11 is preferably convexly curved so as to bear against the central portion of the bottle cap. The arm 10 projects upwardly and inwardly from the inverted U-shaped portion 15 and terminates in an ear 21, the rear face of the ear 21 being in alignment with the rear face of the base 9, both of said bases contacting with the rigid support 7, when the device is attached thereto by means of the screws 8.

It will be understood that when the bottle is in the position shown in dotted lines, Figure 1, that the diametrically opposite sides of the cap 12 contact with the arms 16 and 17 of the U-shaped portion 15, while the lip 14 contacts with the under edge of the cap, so that the U shaped portion serves as a means for connecting the contact portion 11 and the contact portion 14, and also serves as a means, together with said lip 14, to position said cap with its diametrically opposite

sides contacting therewith and with the central portion only of said cap contacting with said fulcrum contact portion.

The general operation of the device is as follows:—Assuming the bottle cap puller to be attached to a rigid support, the bottle is positioned as illustrated in Figure 1, in dotted lines, with the lip 14 bearing against the under edge of the bottle cap for a portion of its circumference and with the ear 20 bearing against the central portion of the cap as hereinbefore defined, and with diametrically opposite sides of the cap engaging the arms 16 and 17. When in this position it will be seen that the cap is positioned by means of the U-shaped portion of the device including the lip 14, and further positioned by the ear 11. Having thus positioned the bottle in the cap puller a downward movement upon the bottle will cause the cap to be removed from the bottle neck.

I claim:

1. A cap puller for bottles comprising a base adapted to be attached to a support, a projection on said base constituting a fulcrum and adapted to engage the central portion only of a bottle cap on a bottle, means on said base adapted to partially encircle and position said cap relatively to and laterally of said projection with a lip thereon to engage beneath the edge of said bottle cap, there being an opening between said positioning means and projection through which a portion of said cap may project, whereby upon tipping said bottle on said projection the cap will be removed from the

bottle, and an arm projecting upwardly from said positioning means and inclined inwardly terminating in alignment with the inner face of said base and spaced apart therefrom, whereby said cap puller may be further attached to said support.

2. A one piece cap puller for bottles comprising a base adapted to be attached to a support, an ear on said base projecting forwardly from the upper end thereof and constituting a fulcrum adapted to engage the central portion only of a cap on a bottle, an inverted U-shaped portion projecting from said base outwardly around said ear with an opening therebetween adapted to receive a portion of said bottle cap, a lip on the lower edge of said U-shaped portion adapted to engage beneath the edge of said bottle cap, said U-shaped portion constituting a means for positioning said ear relatively to the cap and laterally thereof, whereby upon tipping said bottle upon said ear the cap will be removed from the bottle, and an arm projecting upwardly from said U-shaped portion and inclined inwardly terminating in alignment with the inner face of said base and spaced apart therefrom whereby said cap puller may be further attached to said support.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THOMAS C. HAMILTON.

Witnesses:

DANIEL M. PHEE,
MARY E. ECKER.