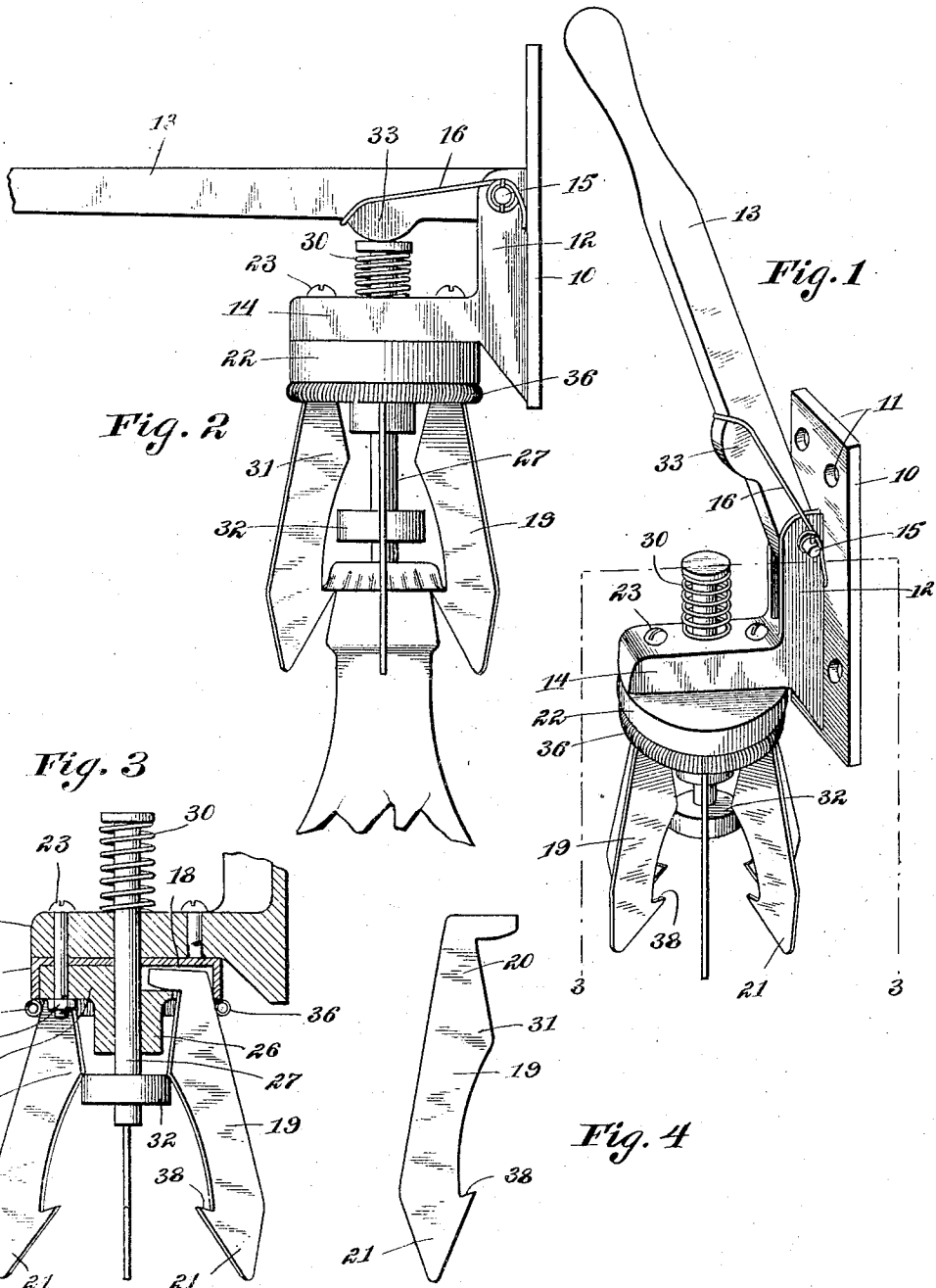


L. W. BOLICK.
BOTTLE OPENER.
APPLICATION FILED DEC. 13, 1916.

1,240,657.

Patented Sept. 18, 1917.



WITNESSES

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LESTER W. BOLICK, OF NEWTON, NORTH CAROLINA.

BOTTLE-OPENER.

1,240,657.

Specification of Letters Patent. Patented Sept. 18, 1917.

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To all whom it may concern:

Be it known that I, LESTER W. BOLICK, a citizen of the United States, residing at Newton, in the county of Catawba and State of North Carolina, have invented new and useful Improvements in Bottle-Openers, of which the following is a specification.

This invention relates to bottle openers and has for its chief characteristic the provision of a structure by means of which the cap or stopper can be separated from the bottle without breaking or otherwise injuring the neck thereof.

More specifically stated, the invention embodies among other features a yieldably supported plunger adapted to be depressed against the cap or stopper to distend or loosen the latter on the bottle, with means for automatically gripping the cap and subsequently dropping the same during the return movement of the plunger, whereby the device is ready for another operation.

The invention also embodies the desired features of simplicity, durability, and is both positive and efficient in operation for the purposes intended.

The nature and advantages of the invention will be better understood when the following detail description is read in connection with the accompanying drawing, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawing forming part of this specification like numerals of reference indicate similar parts in the several views and wherein:—

Figure 1 is a perspective view of the device constructed in accordance with my invention showing the normal position of the respective parts.

Fig. 2 is a view showing the manner of using the device.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 1.

Fig. 4 is a detail view of one of the hook-like elements.

Before entering into a detail description of what is herein shown, I desire to have it understood that the drawing merely illustrates one and the preferred embodiment of the invention which is not considered restrictive, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

Referring to the drawing in detail

indicates a plate by means of which the device in its entirety may be attached to a wall or other suitable support, the plate being apertured as at 11 to accommodate suitable fastening elements. Secured to one side of the plate is a substantially L-shaped bracket arm, the limb 12 of which has pivotally associated therewith an operating lever 13 while the horizontally disposed limb 14 of the bracket supports the actuating elements of the device in a manner to be hereinafter more fully described. The pivot pin 15 of the operating lever has coiled about one extremity thereof a spring 16, one end of the spring bearing against the plate 10 and its opposite end engaging the lever 13 to normally maintain the latter elevated.

A disk like member indicated at 17 is provided with a plurality of diametrically opposed slots 18 to accommodate the hook like elements clearly shown in Fig. 4. Each of these elements are preferably in the nature of a flat blade 19 with one extremity offset as at 20, the blade at its point of juncture with the offset extremity being reduced as at 21. The offset extremities 20 of each blade are positioned within one of the slots 18 of the disk like member, and a flanged cap 22 subsequently positioned about the disk with a view of retaining the blades or hook like elements operatively associated with the disk like member 17 for slight pivotal movement. These elements as a unit are arranged beneath the limb 14 of the bracket and preferably secured thereto by threaded bolts 23 which pass through aligned openings in the limb 14 and the disk like member 17, the bolts having associated therewith nuts 25 to hold the associated parts fixed relatively. The limb 14 is further provided with an enlarged opening disposed in axial alinement with the bore of a sleeve 26 which depends from the disk like member 17, to receive a plunger rod 27 which is passed through the opening in the bracket and through the sleeve 26 for sliding movement. The plunger rod is headed, and encircling said rod with one end bearing against the head is a spring 30, the opposite end of the spring engaging the limb 14 of the bracket and serving to normally maintain the plunger rod elevated or in inactive position. It will be manifest by reason of this construction that the hook-like elements or blades are arranged in a circumferential series about the plunger rod

and are coöperatively related therewith in a manner to be presently stated.

Each of the blades or hook like elements is formed with a cam surface or edge 31 which is engaged by a collar 32 fixed to the plunger rod adjacent its lower extremity, with a view of normally holding the blades collectively in an extended position, to facilitate the introduction of the neck of a bottle between the blades immediately beneath the plunger, when it is desired to remove the stopper or cap therefrom. In practice, the bottle is arranged relative to the plunger in the manner just described, and the lever 13 lowered against the head of the plunger rod 27 thereby depressing the latter against the cap of the bottle. The lever is preferably provided with an enlarged portion 33 which is brought into engagement with the plunger rod to actuate the same, it being manifest that as the plunger is effectively brought into engagement with the center of the cap, the latter is loosened upon the bottle. During this operation the collar 32 is moved out of engagement with the cam surfaces of the hook like elements or blades, whereupon a contractible element 36 is permitted to function to contract the blades about the neck of the bottle, in a manner whereby the hook portions 38 of the blades engage against the lower edge of the cap. Upon release of the lever 13, the spring 16 functions to automatically return the lever to its normal position, while the spring encircling the plunger rod simultaneously functions to return the latter to its normal position. During the return movement of the plunger rod 27, the collar 32 is brought into engagement with the cam surfaces 31 of the blades thereby extending the latter to allow the cap to drop from the blades, which formerly in contracted position held the cap separated from the bottle. The device is then ready for another operation, it being appreciated from the construction and contemplated operation, that caps can be removed from a large number of bottles in quick order, with the least exertion or effort on part of the user of the device.

50 What is claimed is:—

1. A bottle cap remover embodying a yieldably mounted plunger, means for depressing the plunger against the cap to loosen the latter on the bottle, and means for automatically engaging the cap when the plunger is depressed, and releasing said cap with the return of the plunger to normal position.

2. A bottle opener embodying a yieldably mounted plunger, means for depressing the plunger against the cap to loosen the same on the bottle, a plurality of pivotally mounted cap engaging members automatically op-

erable to engage the cap when the plunger is depressed, and means operable with the return of the plunger to normal position to adjust said members to effect a release of the cap.

3. A bottle cap remover embodying a yieldably mounted plunger, means for depressing the plunger against the cap to loosen the same on the bottle, a plurality of pivotally mounted hook like elements adapted to automatically engage the cap when the plunger is depressed, and means carried by the plunger to coöperate with means on said members to automatically extend the latter to release the cap with the return of the plunger to normal position.

4. A bottle opener embodying a yieldably mounted plunger, a lever pivoted above the plunger and adapted to depress the latter against the cap to loosen the same on the bottle, a plurality of cap engaging members automatically operable to engage the cap when the plunger is depressed, and to release said cap with the return of the plunger to normal position, and means for automatically returning the lever to its inactive position.

5. A bottle opener embodying a yieldably mounted plunger, means for depressing the plunger against the cap to loosen the same on the bottle, a plurality of hook like members pivotally mounted about said plunger, means operable with the depression of the plunger to contract said members and bring the latter into engagement with the cap, a collar fixed upon the plunger, and said members having portions disposed in the path of movement of the collar whereby said members are extended to release the cap with the return of the plunger to normal position, and to hold said parts extended.

6. A bottle cap remover embodying means adapted to be brought into engagement with and depressing the cap for loosening the same upon the bottle, and means operable to grip said cap subsequent to the loosening of the latter.

7. A bottle cap remover embodying a yieldably mounted plunger, means for depressing the plunger against the cap to loosen the same on the bottle, and means acting independently of the plunger when the latter is in operative position for gripping the cap when the plunger is depressed.

8. A bottle cap remover embodying means adapted to be brought into engagement with the cap for loosening the same upon the bottle, means for automatically engaging the cap, and said second means being automatic in releasing the cap with the return of the first means to normal or inactive position.

In testimony whereof I affix my signature.
LESTER W. BOLICK.