

March 29, 1932.

E. BARTLETT

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BOTTLE CLEANER

Filed Feb. 24, 1930

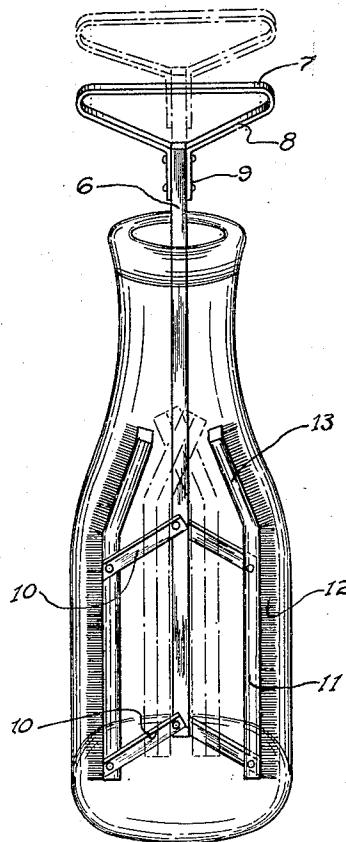


FIG - 1

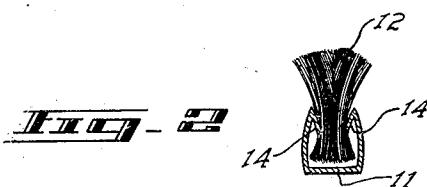


FIG - 2

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UNITED STATES PATENT OFFICE

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BOTTLE CLEANER

Application filed February 24, 1930. Serial No. 430,819.

This present invention relates to new and useful improvements in a bottle cleaner and has for its primary object the provision of a simple and inexpensive form of cleaner which is especially adapted for cleaning milk bottles and the like and may be readily inserted and removed, as desired.

Another object of the invention resides in the provision of a bottle cleaner of the character stated which includes special arms carrying bristles firmly held therein with the arms thus serving as brushes having angularly extended portions to conform to the curved portion of the bottle connecting the body thereof with the restricted neck of the bottle.

The invention has for a further object the provision of a bottle cleaner of the character stated in which all of the brushes are supported and operated from a central stem with which they are connected by toggle arms, so that the brushes may be spread outwardly from one another or drawn inwardly, by longitudinal movement of the stem, while the brushes are within the bottle, thus assuring proper engagement of the brushes with the interior wall of the bottle for thoroughly cleaning the same as they are moved around the wall, by rotation of the stem and all of the brushes carried thereon.

The invention has for a still further object the provision of a bottle cleaner of the character stated which is composed of the minimum number of parts of extremely simple and inexpensive construction and arrangement, thus producing an inexpensive bottle cleaner which may be retailed at a popular price with good profits, thereby making the device commercially attractive.

To the accomplishment of these and related objects as shall become apparent as the description proceeds, my invention resides in the construction, combination and arrangement of parts, as shall be hereinafter more fully described, illustrated in the accom-

panying drawings, and pointed out in the claim hereunto appended.

The invention will be best understood and can be more clearly described, when reference is had to the drawings, forming a part of this disclosure, wherein like characters indicate like parts throughout the several views.

In the drawings:—

Figure 1 is a perspective view of the bottle cleaner, showing the same in use within a conventional milk bottle; and

Figure 2 is an enlarged transverse section through one of the brushes, showing the construction thereof.

Referring more in detail to the drawings, it is to be noted that the bottle cleaner includes a longitudinal stem 6 with a handle 7 provided on its upper end and preferably formed of a metallic strap having its main or central portion at right angles to the stem 6 and the ends 8 of the strap turned back and extended at an angle toward one another and terminating in the parallel extremities 9 secured on opposite sides of the stem 6, at the outer end of the latter. Thus the handle 7 serves as a hand grip through which the hand of the operator may be engaged, if desired, when using the cleaner. The stem 6 is of suitable form in cross section and has pairs of toggle arms 10 extended from opposite sides thereof. Each pair of toggle arms 10 serve to support the body 11 of a cleaning brush 12. The toggle arms 10 are pivotally connected with the stem 6 and with the brush bodies 11. Each brush body 11 is in the form of an elongated channel with its upper portion 13 turned at an angle with respect to the main portion thereof and directed towards the stem 6. Each channel has its upper and lower extremities closed and the sides or flanges of the channel member forming the body 11 have their inner faces concaved transversely while the outer faces are convex and the free longitudinal edges 14 of said sides or flanges are turned

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inwardly at an angle so as to resiliently grip therebetween the bristles of the brush 12. As the main portions of the bodies 11 of the brushes 12 are at all times parallel with the stem 6, they extend longitudinally of the side wall of the bottle when cleaning the same.

As the construction of the device has thus been described in detail, brief reference will now be had to its use and modus operandi: The weight of the brush bodies 11 will cause them to drop by gravity to their lowermost positions around the stem 6 and close to the same, the lower or outer ends of the brush bodies 11 extending past the end of the stem 6. In this condition, the cleaner is inserted in the bottle and then by forcing downwardly on the stem 6, by pressing on the handle 7 thereof, the toggle arms 10 are moved outwardly, thus forcing out the brushes 12 until the bristles contact with the wall of the bottle to thoroughly clean the same as the cleaner is rotated in the bottle or held stationary while the bottle is rotated thereon, as the case may be. In either case, the main portions of the brushes 11 have their bristles 12 engaging the main part of the wall of the bottle while the bristles of the inwardly bent portions 13 of the brushes engage the curved angular portion of the bottle wall, between the main portion and the restricted neck of the bottle. The restricted neck portion of the bottle may be similarly cleaned when the cleaner is only partly inserted in the bottle. It is also to be understood that as the stem 6 is withdrawn from the bottle, the toggle arms 10 will again swing inwardly towards the stem 6 and carry the brushes inwardly toward the centre of the bottle. From the foregoing description taken in connection with the accompanying drawings, it will be manifest that a bottle cleaner is provided that will fulfil all the necessary requirements of such a device, but as many changes could be made in the above description and many apparently widely different embodiments of my invention may be constructed within the scope of the appended claim, without departing from the spirit or scope thereof, it is intended that all matters contained in the said accompanying specification and drawings, shall be interpreted as illustrative and not in a limited sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

As a new article of manufacture, a bottle cleaner including a plurality of channel members having the inner faces of the sides thereof concaved transversely while the outer faces are convex and the free longitudinal edges of the sides are turned inwardly at an angle to serve as resilient inwardly converging gripping members; bristles resiliently held within said gripping members

throughout the length of said channel members; said channel members having their main portions arranged in parallel upstanding relation with their upper ends converging toward one another; the opposite ends of said channel members being closed; a central stem; pairs of toggle arms radiating from said stem and pivotally connected to the latter and to said channel members; and a handle carried by said central stem.

In testimony whereof I hereunto affix my signature.

ERNEST BARTLETT. [L. S.]

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