Oct. 22, 1935. J. L. PARSONS 2,018,086

BOTTLE CLEANING DEVICE

Filed April 26, 1934

Fig. 1.

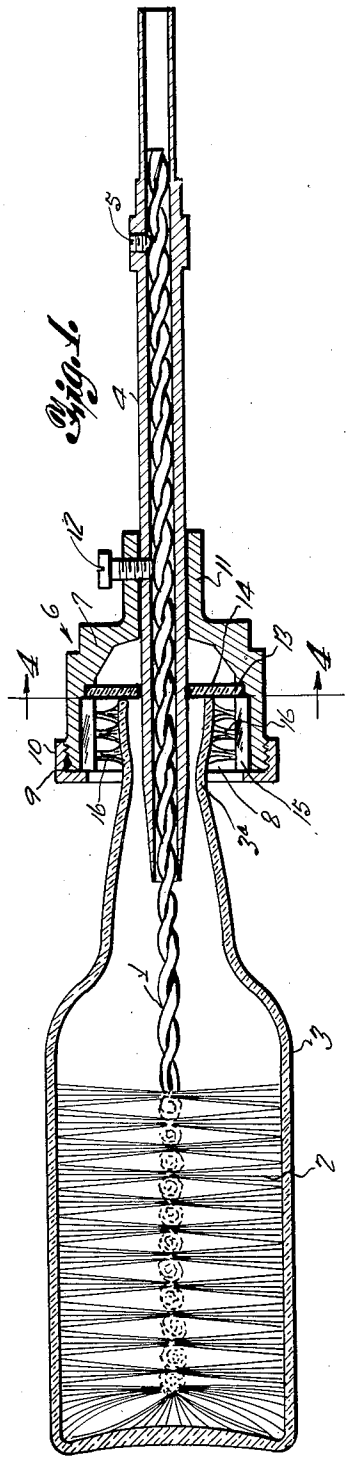


Fig. 4.

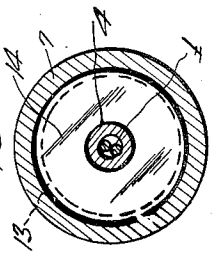


Fig. 6.

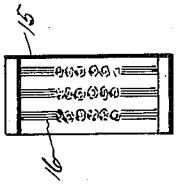


Fig. 3.

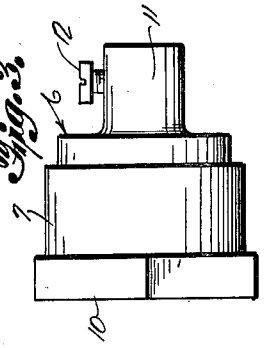


Fig. 5.

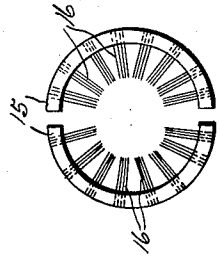
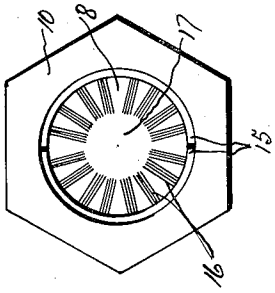


Fig. 2.



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UNITED STATES PATENT OFFICE

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BOTTLE CLEANING DEVICE

John L. Parsons, Pittsburg, Kans.

Application April 26, 1934, Serial No. 722,411

1 Claim. (Cl. 15—164)

This invention relates to bottle cleaning devices, and more particularly to a form of cleaner having means for simultaneously cleaning both the interior of the bottle and the exterior, grooved neck portions thereof. The main object of the invention therefore is to provide a bottle cleaning device comprising a flexible shaft for insertion thru the neck of the bottle the same having a conventional form of brush at its predetermined inner end, that is to say the end designed for insertion within the bottle, a removable, tubular handle for the outer end of the flexible shaft for operatively supporting the shaft, the said handle being adjustably mounted, and a neck cleaning assembly adjustably mounted upon the tubular handle, the said assembly including a cupped element adjustably mounted upon the handle, the open rim thereof being exteriorly screw-threaded for engaging an open, interiorly threaded and flanged cap, a rubber washer for seating within the base of the cupped element, and a two-part ring lined interiorly with stiff bristles, the ring being assembled within the cupped element and there locked by the said cap, the said bristled ring being adapted for cleaning the outer sides of the bottle neck simultaneously with the operation of the inner brush. Another object is to provide in a device of the kind referred to, a neat, compact and convenient assembly of elements designed for simultaneously cleaning the inner portion of a bottle and the outer sides of the neck thereof, the said elements being readily adjustable for cleaning bottles of various sizes.

With these and such other objects in view as may be developed in the following specification, attention is directed to the accompanying drawing as embodying a preferred form of the invention, and wherein:

Figure 1 is a longitudinal section through the device embodying the subject of my invention, the said device being shown as inserted within or mounted upon a bottle as in the process of cleaning same, the flexible cable and fastening screws being shown in full lines.

Figure 2 is an end view of the bottle neck cleaner alone.

Figure 3 is a side elevation of the structure in Figure 2.

Figure 4 is a cross section along the line 4—4 in Figure 1.

Figure 5 is a detached end view of the two part bristle ring alone, the parts being shown slightly separated.

Figure 6 is an inside elevation of one part of the bristle ring alone.

In combination with the flexible shaft 1 provided at one end with the conventional brush 2 adapted for cleaning the interior of the bottle 3, the invention comprises a tubular handle 4 thru which the said flexible shaft is passed and to which it is adjustably locked by means of a set screw 5, and a neck cleaning assembly referred to generally at 6 and which includes a cup or cupped element or brush cup 7 open at one end 8 and exteriorly threaded thereat as shown at 9 for engaging an open, flanged and interiorly threaded cap 10. The opposite or closed end of the brush cup is provided with a tubular extension 11 thru which the tubular handle 4 is slidably passed and to which it may be adjustably locked at any desired point by means of a set screw 12, adapted for engaging either the hole shown, as in Figure 1, or for engaging the tubular handle 4 at either side of the hole. The brush cup is formed interiorly and adjacent the closed end with an annular ledge 13 upon which is seated a rubber gasket or washer 14, there being a substantial space left in the cup back of the said ledge and washer, as shown in Figure 1 of the drawing and for a purpose to be pointed out. A two-part brush ring 15 is provided, upon the inner concaved faces of which are mounted tufts 16 of brass bristles or bristles of any desired material, the same being arranged circularly and forming the central opening 17 between them, thru which the neck 3a of the bottle is designed to pass as the brush 2 is passed inside the bottle thru the said neck. The ring 15 is made in two equal halves to facilitate mounting the bristle tufts 16 upon the inner concaved faces thereof, and for a further purpose in the use of the tool later referred to. Owing to the adjustability of the handle 4 relative to the shaft 1 and of the brush cup or neck cleaning assembly 6 relative to the handle 4, the device may be readily adapted for cleaning bottles of varying sizes. When so adjusted the inner brush 2 and outer bristles 16 are operated at the same time by turning the handle 4. Where the bottle neck has laterally expanded rings or flanges (not shown) which would not easily pass thru the opening 17 of the bristles 16, the flanged cap 10 may be removed and the two halves of the ring 15 may be opened apart for engaging the said rings and then closed thereover and the cap 10 replaced for locking the assembly together for the cleaning of the bottle neck. For an unusually long bottle neck the washer 14 may be removed thus permitting the neck to pass up into the space back of the washer.

It is thought that from the foregoing description the use and operation of the invention will be fully understood, and while I have herein described certain structural features of the invention, it is understood that I may vary the same in minor details so as to best adapt the invention to practical use, not departing however from the spirit of the invention as defined in the appended claim. Moreover, while my invention is here shown and described as used in combination with a conventional form of brush for cleaning the interior of a bottle, my invention itself resides more particularly in the neck cleaning assembly for cleaning and scouring the grooved exterior surfaces of the bottle neck. This outer, neck cleaning assembly may be used alone for the stated purpose, or as an attachment for the conventional brush for cleaning the bottle interior, in which latter event it is secured to the shaft of the conventional brush, as hereinbefore fully pointed out and described.

I claim:

In a device for cleaning bottles having extended neck portions with laterally expanded rings thereon, the said device embodying a tubular handle thru which the shaft of a conventional bottle cleaning brush may be passed and adjustably locked thereto, and embodying a bottle neck cleaning assembly adjustably mounted upon the tubular handle which is slidably passed therethru, the neck cleaning assembly having a brush cup open at one end and exteriorly threaded thereat for engaging an open, flanged and interiorly threaded cap, the interior of the brush cup being formed with an annular ledge supporting a washer, the provision of a two-part brush ring parted diametrically in a plane cutting the ring perpendicularly, the resulting ring segments having neck cleaning bristles upon their inner concaved faces for engaging the exteriors of the bottle necks, the two-part structure of the brush ring enabling the spreading of the assembly asunder for embracing the said laterally expanded rings of the bottle necks, the said threaded cap of the brush cup serving to lock the elements together within the cup.

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