No. 818,086. PATENTED APR. 17, 1906.

B. GOHRBAND.

BOTTLE WASHER BRUSH.

APPLICATION FILED DEC. 4, 1905.

Fig. 1.

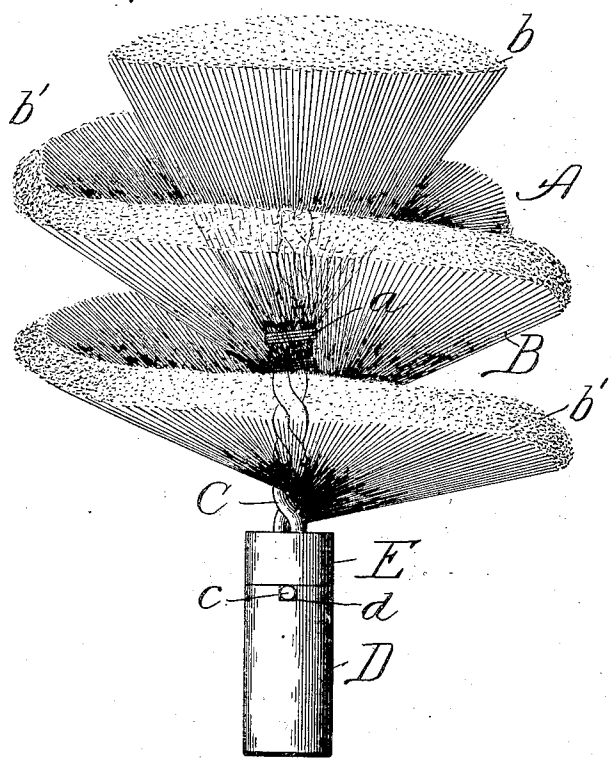
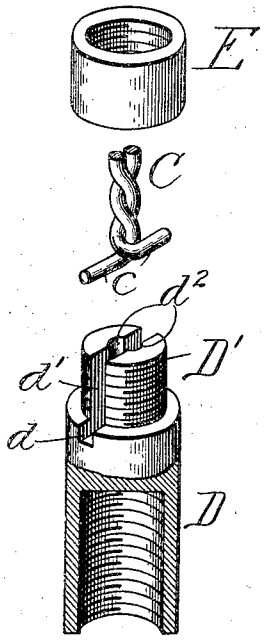


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

BERNARD GOHRBAND, OF CHICAGO, ILLINOIS, ASSIGNOR TO E. GOLDMAN & COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BOTTLE-WASHER BRUSH.

No. 818,086. Specification of Letters Patent. Patented April 17, 1906.

Application filed December 4, 1905. Serial No. 290,208.

To all whom it may concern:

Be it known that I, BERNARD GOHRBAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Bottle-Washer Brushes, of which the following is a specification.

My invention relates to an improved construction of the brush device used for scouring the interiors of bottles subjected to the cleansing action of a bottle-washing machine, such as that set forth in Letters Patent of the United States No. 768,492, dated August 23, 1904, in which such brush devices are shown and described.

The object of my invention is to provide improved means for connecting the brush-head or brush proper with the upper end of the vertical spindle with which it is used on a machine of the kind referred to and which is rotated axially and reciprocated intermittently to introduce the brush into a bottle to be scoured, brought into registration with it by the action of the machine, and to withdraw it therefrom after it has performed its scouring function.

In the accompanying drawings, Figure 1 is a view in elevation, exaggerated beyond actual size, of a brush device embodying my improvement; and Fig. 2, a perspective view, also exaggerated beyond actual size, showing the parts involved in my improvement in disassociated relation ready to be assembled for fastening the brush-head to a socket which is adapted to be fastened on the upper end of a brush-spindle.

A is the brush-head, comprising brush fiber B and a stem C, on which the bristles are fastened. The stem is formed of lengths of wire, of which two are shown, twisted spirally together, and the bristles are disposed between the spirally-twisted wires. Between the ends of the brush-fiber it is bound, as by wire, at *a* about the stem to contract the upper section into a narrower bunch *b*, presenting the bristles at sharper angles to the stem for scouring the interior of the bottom of a bottle, while the lower bunch *b'* is more expanded, having the bristles extending more nearly perpendicularly to the stem for scouring the inner surface of the bottle-wall. The wires at the lower end of the stem are bent outward in diametrically opposite directions at right angles to the body of the stem to form a species of cross-head *c*, by which to secure the brush-head in place, as hereinafter described.

D is an internally-threaded socket or head adapted to be screwed upon the upper end of one of the aforesaid rotatable and reciprocable spindles (not shown) of a bottle-washing machine. The upper end of the head D is provided with a diametrical recess *d* and has extending from it an externally-screw-threaded neck D', split longitudinally to divide it into two similar sections separated from each other by a slot *d'* coincident with and of the transverse width of the recess *d*, the inner sides of the sections containing central longitudinal grooves d^2 d^2 to receive the twisted stem C. At E is represented a collar or nut adapted to screw upon the neck D'.

To assemble the parts, the stem is adjusted on the head D by introducing the cross-head *c* through the passage or slot *d'* to seat the cross-head in the recess *d*, whereby so much of the stem as is contained between the sections of the neck D' is centered by entering the grooves d^2. Thereupon the nut E is screwed upon the neck against the stem ends *c* in the recess *d*, thereby clamping the stem in place. The confinement of the brush-head on the spindle, of which the socket D forms an end, is thus rendered steady and firm, and the construction facilitates adjustment of the parts together and their separation.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination, a stem provided on one end with a cross-head, brush fiber secured to the stem toward its opposite end, a head provided in its top with a recess and having a slotted neck extending from it through which to insert the stem and enter the cross-head in said recess, and a collar on said neck clamping said cross-head in said recess, for the purpose set forth.

2. In combination, a stem provided on one end with a cross-head, brush fiber secured to the stem toward its opposite end, a head provided in its top with a recess and having a slotted externally-threaded neck extending from it through which to insert the stem and enter the cross-head in said recess, and a nut screwed upon said neck and clamping said cross-head in said recess, for the purpose set forth.

3. In combination, a stem composed of spirally-twisted wires formed into a cross-head at one end, brush fiber confined between the twisted wires of the stem toward its opposite end, a head adapted to be connected at its lower end with a spindle and provided in its top with a recess and with a slotted threaded neck extending from said top, the neck being longitudinally grooved at opposite sides of the slot therein, and a nut screwed upon said neck and clamping said cross-head in said recess, for the purpose set forth.

BERNARD GOHRBAND.

In presence of—
M. S. MACKENZIE,
J. H. LANDES.