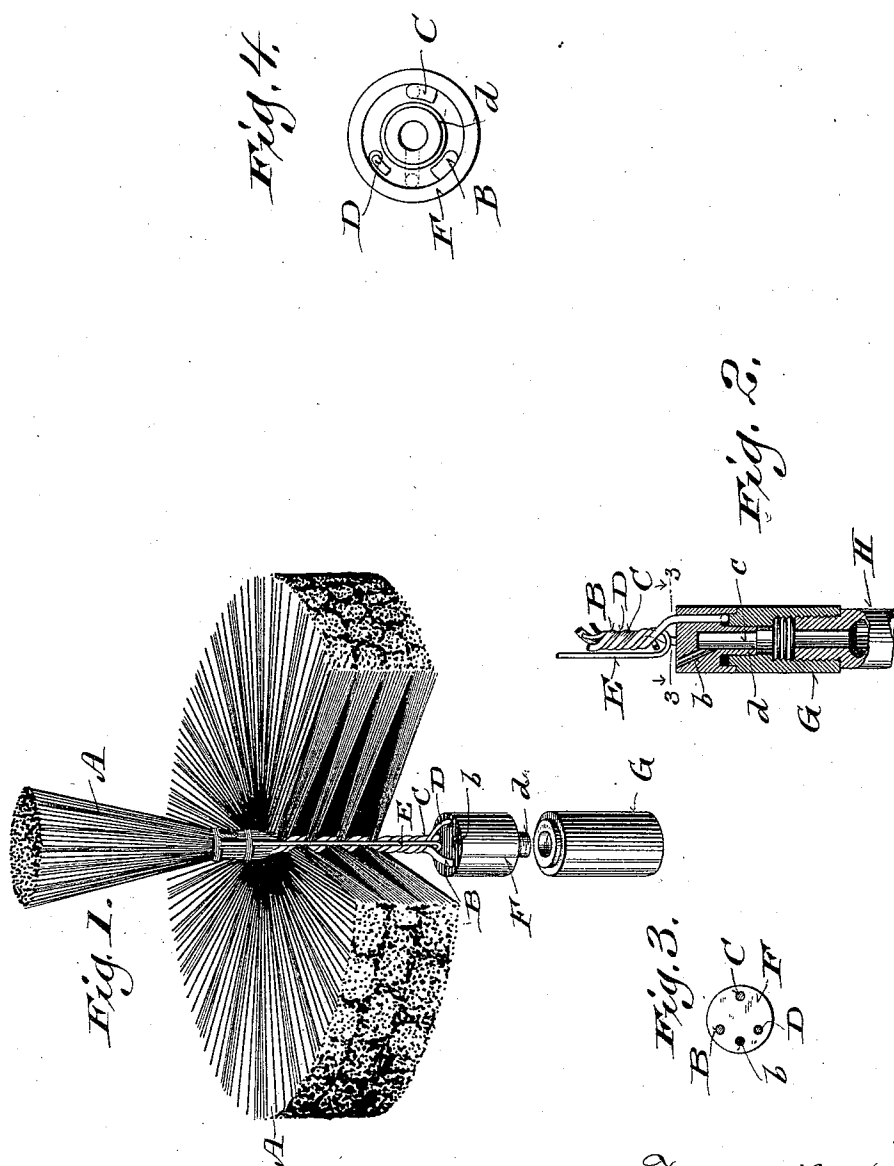


(No Model.)

A. R. WIENS.
BOTTLE WASHER.

No. 529,823.

Patented Nov. 27, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

ADOLPH R. WIENS, OF MILWAUKEE, WISCONSIN.

BOTTLE-WASHER.

SPECIFICATION forming part of Letters Patent No. 529,823, dated November 27, 1894.

Application filed April 16, 1894. Serial No. 507,644. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH R. WIENS, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Attachments for Bottle-Washing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide bottle-washing machines with more efficient brushes and water distributing nozzles than those heretofore employed; and it consists in certain peculiarities of construction and combination of parts hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents a perspective view of my improved brush, as well as a sectional holder for the same, this holder being also embodied in my invention; Fig. 2, a detail sectional view of the holder joined to a water-distributing pipe constituting part of a bottle-washing machine; Fig. 3, a detail plan view partly in horizontal section on line 3—3 of the preceding figure, and Fig. 4, a plan view of one section of the brush-holder inverted, the scale of this figure being larger than those of its predecessors.

Referring by letter to the drawings, A represents bristles or such substitutes therefor as are common in the art of brush-making, said bristles or their substitutes being twisted in tufts between four strands of wire to form a circular brush. As a matter of economy and convenience in the manufacture of the brush, I prefer to have two of the wire-strands D, E, of lighter grade than the other strands B, C, in the series. At one end of the brush the wire-strands B, C, D are spread apart to form a tripod and the remaining strand E being considerably longer than the others in the series is bent across the bristles to part the latter and thereby form a gap that permits the escape of water and sediment from a bottle acted upon by said brush. The wire strand E and certain of the bristles are bound together to form an axial tip as shown in Fig. 1, and those wire strands that are spread apart at the other end of the brush are run through corresponding openings in a metal nozzle F and clinched against the same.

The nozzle F may constitute the brush-holder or a section of the same, and in either case its outlet port *b* is inclined from a central longitudinal chamber or recess *c* to thereby effect a better distribution of water in a bottle operated upon by the brush, the gap in the latter being arranged so that the jet of water from said nozzle may have free play against the bottle.

The nozzle F is designed for detachable connection with a water-pipe and while the construction for effecting this connection may be considerably varied, I prefer to provide said nozzle with a screw-threaded shank *d* for engagement with the tapped outer end of the bore in a sleeve G that has screw-threaded engagement with a rotary water-pipe H of a bottle-washing machine. The sleeve is preferably shouldered at its outer end and the nozzle recessed to receive the shoulder as clearly illustrated in Fig. 2, said shoulder binding against the clinched ends of the wire strands run through said nozzle to thereby hold the brush firmly in place.

From the foregoing it will be seen that the water from the pipe H finds its way through the port *b* in the nozzle to effect a thorough rinsing of a bottle acted upon by the brush, and the latter being worn out a new one may be quickly substituted, this being one of the important advantages of my invention.

Inasmuch as there is little or no wear on the brush-holders they will last indefinitely and consequently after a machine is fitted with the same the brushes will be supplied from time to time as becomes necessary. Hence it is obvious that said brushes may be furnished to the trade with or without holders.

As one of the features of my invention it is to be understood that all of the wire strands in the brush are preferably of finer gage than those employed in the manufacture of ordinary two-wire bottle-cleansing brushes, and whether said brush be adapted for use in connection with a rinsing nozzle or otherwise, it follows that the employment of an increased number of wires having a gage less coarse than usual in a two-wire brush and spread apart to form a stiffening support for connection with a suitable holder, will give necessary strength to the brush and at the same

time permit a reduction of diameter when the bristles are crowded against said wires to effect an entrance into a bottle through the neck of the latter. Owing to this provision
5 for reduction of diameter the passage of the brush through a bottle-neck is rendered easy and the rapid wear of the bristles common to the ordinary two-wire brushes is obviated.

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

1. A brush for bottle-washing machines, the same consisting of bristles or analogous material twisted with a plurality of wire-strands
15 to form a circular mass parted by at least one of the strands bent across said mass to form a gap and bound with some of the bristle-like material to form a tip, the remaining strands being spread apart at their ends farthest from
20 said tip to engage with openings in a water-pipe nozzle having its outlet facing said gap in the brush, substantially as set forth.

2. A nozzle provided with a series of longitudinal openings for engagement with stem-
25 strands of a wire and bristle-brush, a screw-threaded shank and a recess surrounding the shank; in combination with a sleeve attach-

able to a water-pipe in a bottle-washing machine and having a threaded bore that engages the nozzle-shank, as well as a shoulder
30 that fits the recess surrounding said shank, substantially as set forth.

3. A radially gapped wire and bristle-like brush having wire-strands thereof spread apart at one end, a nozzle having a series of
35 longitudinal openings for engagement of said strands, a screw-threaded shank, a recess surrounding the shank and an inclined outlet-port that faces the brush-gap; in combination with a sleeve that is attachable to a wa-
40 ter-pipe in a bottle-washing machine and has a threaded bore that engages the nozzle-shank as well as a shoulder that fits the recess surrounding said shank against clinched ends of said brush-strands, substantially as set forth.
45

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

ADOLPH R. WIENS.

Witnesses:

H. G. UNDERWOOD,
HENRY DANKERT.