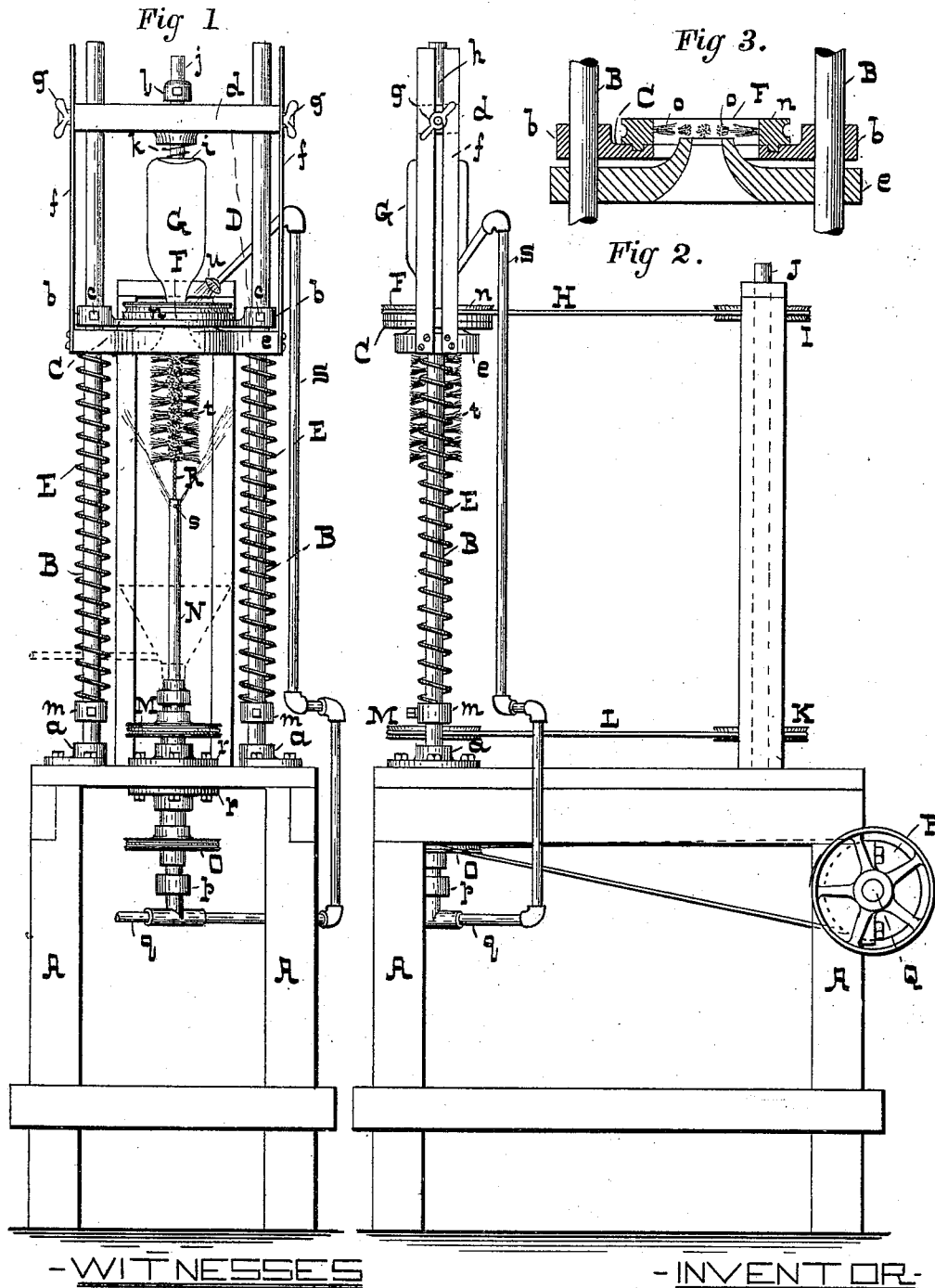


(No Model.)

G. E. D. BALDWIN.
MACHINE FOR WASHING BOTTLES.

No. 420,899.

Patented Feb. 4, 1890.



-WITNESSES

David Fisher
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-INVENTOR-

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UNITED STATES PATENT OFFICE.

GEORGE E. D. BALDWIN, OF BALTIMORE, MARYLAND, ASSIGNOR OF PART
TO JOHN Q. MCAFEE AND HENRY KREOGER, OF SAME PLACE, AND
JAMES HUGHES, OF WASHINGTON, DISTRICT OF COLUMBIA.

MACHINE FOR WASHING BOTTLES.

SPECIFICATION forming part of Letters Patent No. 420,899, dated February 4, 1890.

Application filed July 15, 1889. Serial No. 317,567. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. D. BALDWIN, of the city of Baltimore and State of Maryland, have invented certain Improve-
5 ments in Bottle-Washing Machines, of which the following is a specification.

This invention relates to a bottle-washer in which the outside and the inside of the bottle are simultaneously cleansed by the action
10 of revoluble brushes and water, as will hereinafter fully appear.

In the description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof,
15 and in which—

Figure 1 is a front elevation of the improved machine, and Fig. 2 a side elevation of the same. Fig. 3 is a detail of the machine on an enlarged scale.

20 In the said drawings, A represents the frame or table of the machine, and B columns, the lower ends of which rest in sockets *a* on the top of the table.

C is a plate having lugs *b*, through which
25 the columns B pass. This plate is situated some distance above the table A, and it is held in place by means of set-screws *c*.

D is a bottle-frame, consisting of the upper and lower cross-heads *d* and *e*, connected by
30 means of the side bars *f*. These cross-heads slide on the columns B, and their distance apart is regulated to suit the length of the bottles to be cleaned.

The adjustment of the distance between
35 the cross-heads is effected by means of the thumb-screws *g*, the threaded portions of which pass through slots *h* in the bars *f*. The upper cross-head *d* is provided with a seat *i* for the bottom of the bottle at the end of a
40 stem *j*, which passes through the said upper cross-head, and has a spring *k* to force the seat outwardly or in contact with the bottom of the bottle. A collar *l* on the stem *j* serves
45 to prevent the falling of the seat when there is no bottle in place.

The bottle-frame D is supported by springs E E, coiled about the columns B and resting

on collars *m*, which may be adjusted in height to alter the tension of the springs.

F is an annular brush for scouring the exterior of the bottle, which is shown in the bottle-frame and denoted by G. This annular
50 brush consists of a ring *n*, of any suitable material, the lower edge of which rests in a groove in the upper face of the plate C. (See
55 Fig. 3.) The inner side of the ring *n* is provided with bristles in tufts *o*, and the ring is grooved on the outside, so as to receive a belt H, which is driven from a pulley I. The pulley I is on a shaft J, supported in suitable
60 bearings in the frame A, and it is fitted with a similar pulley K on its lower end. This pulley K is connected by a belt L to another pulley M on the hollow brush-shaft N, hereinafter described. Another pulley O, lower
65 down on the hollow brush-shaft and under the table-top, is united with the pulley P on the driving-shaft Q. (See Fig. 2.)

The hollow brush-shaft N rests in a coupling *p*, forming a part of a water-supply pipe
70 *q*, which is supported in any suitable manner, so that a tight joint is formed between the stationary and the revoluble parts. This hollow brush-shaft revolves in a bearing *r*, secured
75 to the top of the table.

R is the brush-shaft, attached in any suitable manner to the top of the hollow brush-shaft N, and below the point of attachment
are four angularly-placed holes *s*, through
80 which water is projected, as shown in Fig. 1. The bristles of this brush are in tufts, (denoted by *t*.)

The branch water-pipe S, terminating, preferably, in a rose *u*, is situated over the annular brush, and through it water is projected
85 into the same, as shown in Fig. 1.

Supposing the brushes to be in operation and water turned on and the bottle-frame to be occupied and in an elevated position, the frame is drawn down by hand or foot power,
90 which causes the bottle to pass through the annular brush and the central brush to enter the bottle with streams of water, as will be readily understood. As soon as the cen-

tral brush has passed to the bottom of the bottle the frame is allowed to ascend and the bottle, after being emptied of its contained water, removed in a thoroughly-cleansed condition and another one placed in position.

During the operation described the outside of the bottle is cleansed by the action of the annular brush and water.

I claim as my invention—

- 10 1. In a bottle-washer, the combination of a table, columns erected on the table, a fixed plate held to the columns, carrying an annular brush, with the bristles extending toward the center thereof, adapted to be revolved, a
15 bottle-frame consisting of two cross-heads adapted for vertical movement on the columns, with one above and the other below the plate which supports the annular revoluble brush, a central revoluble brush to enter the bottle
20 as the same is drawn down, and pipes to convey water to the exterior and the interior of

the bottle, substantially as and for the purpose specified.

2. In a bottle-washer, a table, columns erected on the table, and a plate secured to said
25 columns, combined with an annular revoluble brush, with its bristles extending toward the center and having its outer surface grooved for a driving-belt, substantially as and for the purpose specified.

3. In a bottle-washing machine, a revoluble
30 annular brush having an annular projection and a peripheral belt-groove, combined with a fixed plate having an annular recess in which the said annular projection rests and
35 a driving-belt, whereby the said annular brush is operated, all combined substantially as and for the purpose specified.

GEORGE E. D. BALDWIN.

Witnesses:

WM. T. HOWARD,
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