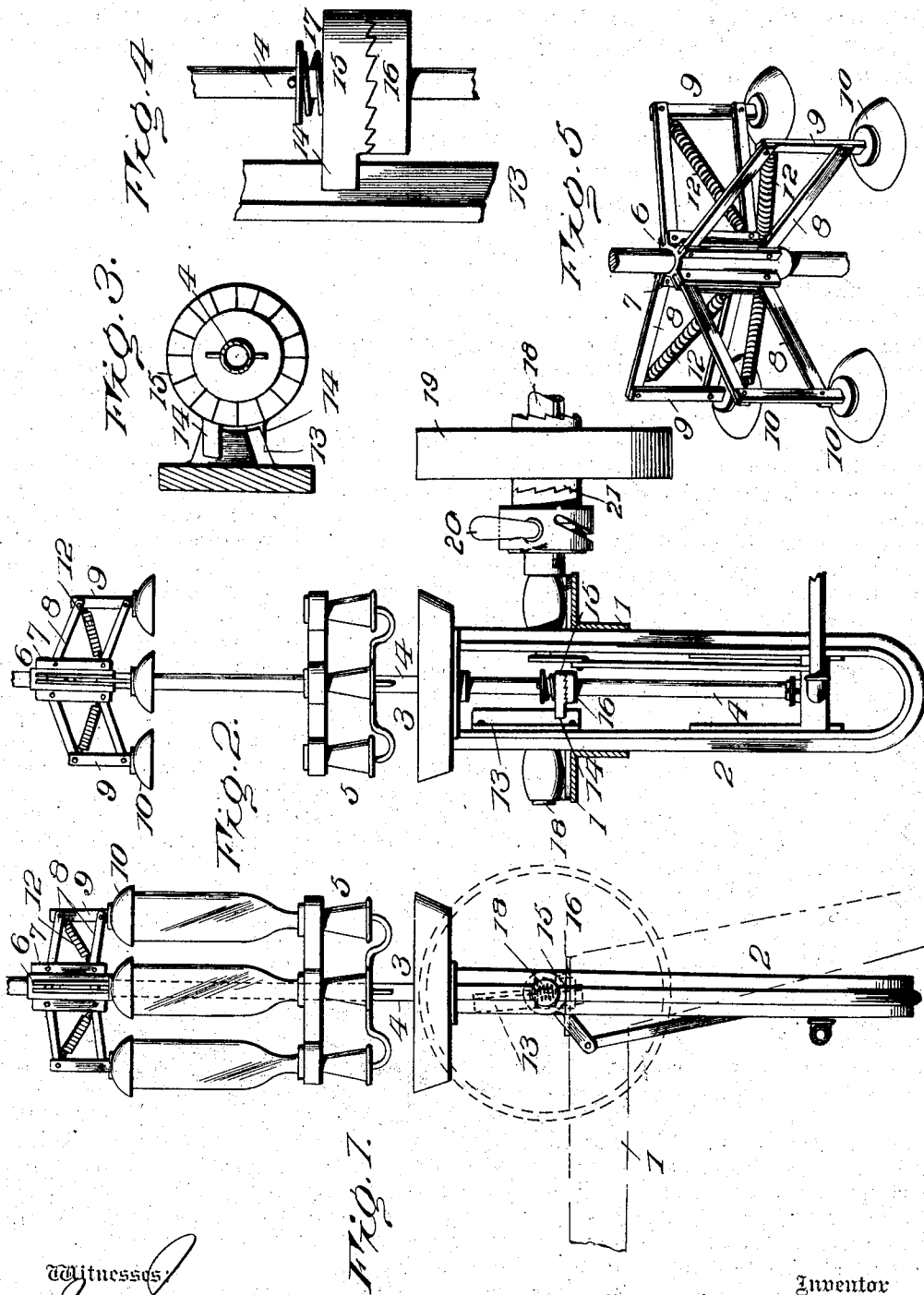


No. 761,442.

PATENTED MAY 31, 1904.

W. E. BROWN.
BOTTLE WASHING MACHINE.
APPLICATION FILED AUG. 24, 1903.

NO MODEL.



Witnesses

J. L. Smith
Wm. L. Smith

Fig. 1.

By *his* Attorney

Inventor

William E. Brown

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UNITED STATES PATENT OFFICE.

WILLIAM E. BROWN, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO BROWN-WINSTANLEY MANUFACTURING COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

BOTTLE-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 761,442, dated May 31, 1904.

Application filed August 24, 1903. Serial No. 170,644. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. BROWN, of Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Bottle-Washing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide in a bottle-washing machine improved means for holding the bottles in their carrier and also improved means for effecting the rotation of the carrier during the longitudinal reciprocation thereof.

The invention, which is primarily designed for power-operated machines, although not restricted to such use, will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation with the carrier in its elevated position, the supporting-frame being indicated in dotted lines, as is also the actuating-wheel, to show the relative positions. Fig. 2 is a view looking at Fig. 1 at right angles thereto viewed from the left, the actuating-wheel and its adjuncts being in full lines, while portions of the supporting-frame are in section. Figs. 3 and 4 are enlarged end and plan views, with parts in section, of the means for imparting a rotary motion to the carrier. Fig. 5 is an enlarged view of the bottle-holders, parts being omitted.

Referring to the drawings, 1 designates the supporting-frame, wherein is pivotally mounted the carrier-support 2. The carrier 3 is in the main constructed after the form shown and described in Letters Patent of the United States, No. 743,821, issued to me November 10, 1903, and comprises a longitudinally-reciprocable water-conveying rod or tube 4, which supplies water to a series of shot-cups 5, carried by the rod and forming seats for the open ends of the bottles. Secured to this rod are the bottle-holders for engaging the closed ends of the bottles and holding the lat-

ter firmly against their seats. These holders comprehend in their entirety a sleeve 6, adjustably fastened to rod 4 and having longitudinal ribs 7, to each of which latter are pivotally secured two laterally-extended arms 8, connected together at their outer ends by a bar 9, approximately paralleling the carrier-rod. To the lower or inner ends of bars 9 are fastened the bottle-engaging cups 10. These cups are normally held tight against the closed ends of the bottles by springs 12, connecting the outer ends of the upper or outer arms with the inner ends of the lower or inner arms, all as clearly shown in Fig. 5.

In the before-noted patent the means employed for effecting the rotation of the carrier comprehended a ratchet-wheel on the carrier-rod engaging a pivoted plate on the carrier-support. In the present instance the means employed for accomplishing the same end, but in a more satisfactory and positive manner, contemplates the employment of a fixed track-plate 13, extending from the inner side of one of the bars of the carrier-support, but set at an angle to the plane of reciprocation of the carrier. This angularly-arranged plate is engaged or sandwiched by two spaced-apart lugs 14 of a clutch-collar 15, loose on rod 4, but held into engagement with a second or complementary collar 16, fast on such rod, by means of a spring 17. Both of these clutch-collars have interlocking teeth, so that as the carrier is reciprocated the loose part or member by reason of its engagement with the fixed track will be turned a portion of a revolution each way, and by intermeshing with the fixed member the carrier-rod will be revolved to the extent of the length of the intermeshing teeth at each reciprocation of the carrier.

It is obvious that any suitable means may be employed for supplying water to the bottles and for reciprocating the carrier. I prefer in power-machines to arrange the carriers in pairs and actuate them from a common source either simultaneously or alternately. On the carrier-actuating shaft is a constantly-rotated pulley 19, which may be locked to

such shaft to effect the actuation of the machine by the sliding of collars 20, one only of which is shown, such collars being splined to the shaft and having, like the pulley, ratcheted hubs 21.

The advantages of my invention are apparent to those skilled in the art.

I claim as my invention—

1. In a bottle-washing machine, the combination with the reciprocating carrier-rod, of the bottle-holders mounted thereon comprising a series of engaging devices, supports therefor approximately paralleling the said carrier-rod, arms pivotally connecting said supports to said rod, and springs tending to hold said devices against the bottles, as set forth.

2. In a bottle-washing machine, the combination with the reciprocating carrier, of the bottle-holders mounted thereon comprising a series of engaging devices, supports therefor paralleling the carrier, and loosely-mounted parallel arms pivoted to said support, as set forth.

3. In a bottle-washing machine, the combination with the reciprocating carrier having a central rod, of the bottle-holders comprising a sleeve mounted on such rod, parallel arms loosely secured to such sleeve, bars supported by said arms at their outer ends, bottle-engaging devices secured to such bars, and springs acting on said arms, substantially as set forth.

4. In a bottle-washing machine, the combination with the reciprocating carrier having a central rod, of the bottle-holders comprising a sleeve mounted on such rod, having longitudinal ribs, arms pivoted at their inner ends to said ribs, bars paralleling said sleeve to which said arms are pivoted at their outer ends, springs connecting the opposite ends of the arms of each pair thereof, and bottle-en-

gaging devices carried by such bars, substantially as set forth.

5. In a bottle-washing machine, the combination with the carrier-support, the carrier, and means for reciprocating the same, of a two-part clutch carried by the carrier, one part being fixed and the other movable, and a fixed guide at an angle to the plane of reciprocation of the carrier and with which the movable part of the clutch engages, as set forth.

6. In a bottle-washing machine, the combination with the carrier-support, the carrier, and means for reciprocating the same, of a two-part clutch carried by the carrier, both of said parts having intermeshing teeth, one part being fixed to the carrier, a spring for normally holding the other or movable part in engagement with the fixed part, and a fixed guide at an angle to the plane of reciprocation of the carrier and with which the movable part of the clutch engages, substantially as set forth.

7. In a bottle-washing machine, the combination with the carrier-support, the carrier having a central rod, and means for reciprocating the carrier and its rod, of a two-part clutch on said rod, one part being fast and the other loose, the latter having laterally-extended lugs, and both parts having intermeshing teeth, a spring bearing against said loose part, and a fixed guide set at an angle to the plane of reciprocation of the carrier and with which said lugs engage, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM E. BROWN.

Witnesses:

F. WINSTANLEY,
C. B. WARREN.