

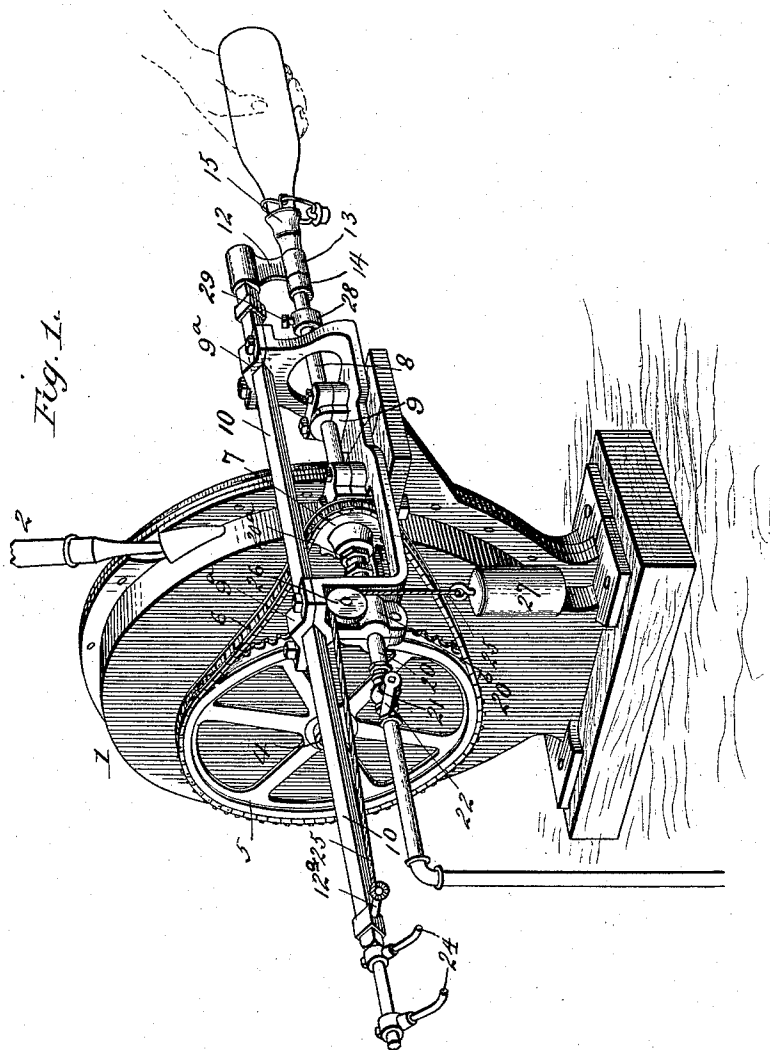
(No Model.)

2 Sheets—Sheet 1.

W. M. WISE.
BOTTLE WASHER.

No. 470,387.

Patented Mar. 8, 1892.



Witnesses
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Inventor
William M. Wise
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Alexander Davis

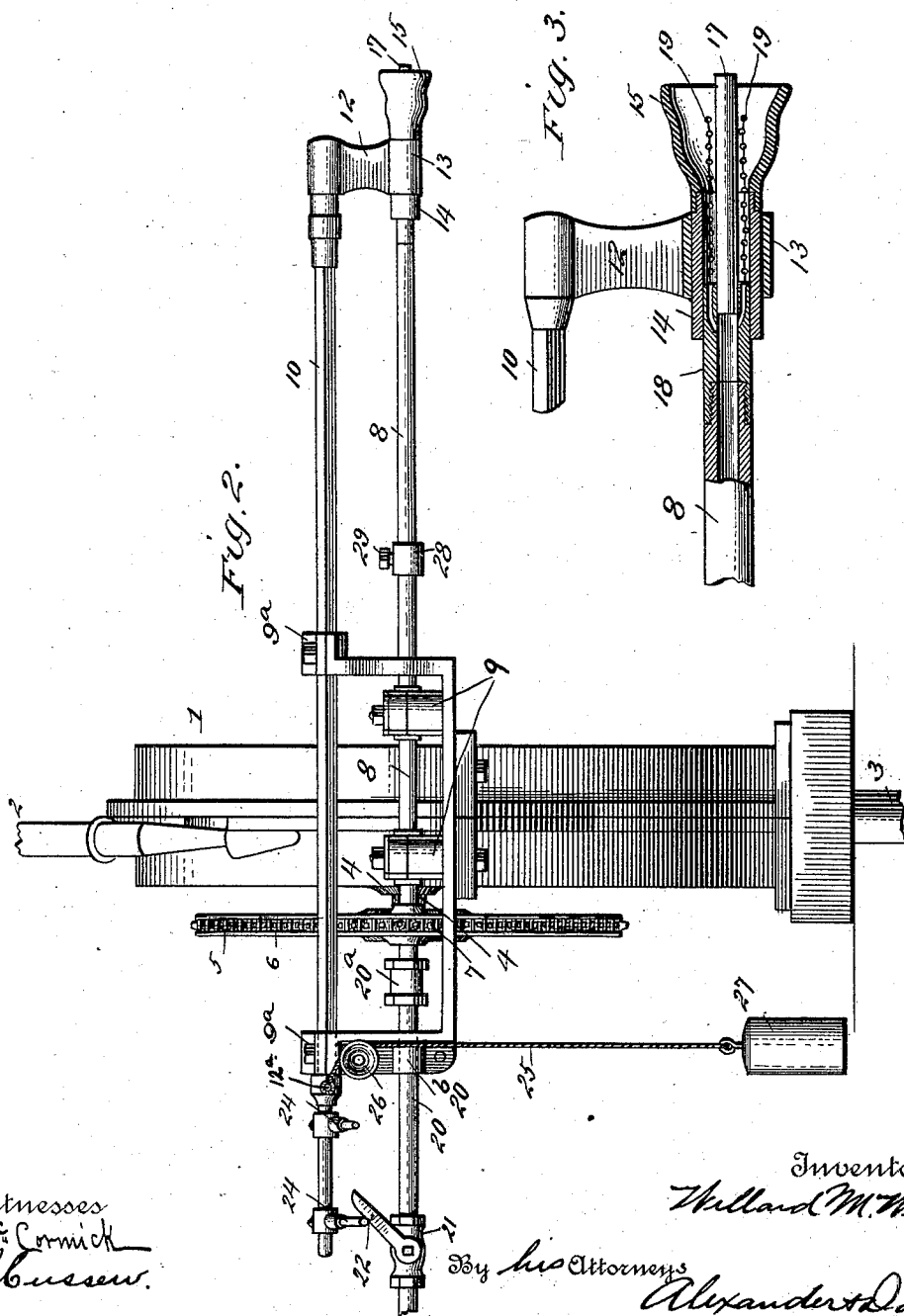
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UNITED STATES PATENT OFFICE.

WILLARD M. WISE, OF WILLIAMSPORT, PENNSYLVANIA.

BOTTLE-WASHER.

SPECIFICATION forming part of Letters Patent No. 470,387, dated March 8, 1892.

Application filed October 16, 1891. Serial No. 408,936. (No model.)

To all whom it may concern:

Be it known that I, WILLARD M. WISE, a citizen of the United States, and a resident of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Bottle-Washers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in machines for washing bottles in a rapid, expeditious, and efficient manner.

The invention consists in the novel construction and combination of parts hereafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a machine constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detail sectional view.

In the said drawings, the reference-numeral 1 designates a rotary water-motor, 2 being the inlet thereof, and 3 the outlet. This motor may be of any ordinary construction, and instead of a water-motor any other motor found suitable may be substituted therefor. Secured to the shaft 4 of the motor is a sprocket-wheel 5, connected by means of a sprocket-chain 6 with a sprocket-pinion 7, mounted upon a hollow shaft 8, arranged parallel with motor-shaft and journaled in boxes 9, supported on a bracket formed on one side of the casing of the motor, by means of which hollow shaft the brush is rotated.

Working in the boxes 9^a, supported by suitable vertical arms above and parallel with the shaft 8, is a square or angular rod or bar 10, capable of sliding lengthwise, but not of rotating. The play or lengthwise movement of this rod or bar is about equal to the length of an ordinary bottle. Upon one end of this rod or bar is a downwardly-depending arm 12, connected with a collar 13, secured to a sleeve 14, the sleeve having a funnel-shaped mouth 15 secured to its outer end. This sleeve is movable longitudinally upon the outer end of the rotatable tubular shaft 8, which is

provided at its outer end with a tube 18, carrying a rod 17, and a series of short chains 19, constituting the brush. Communicating with the opposite end of shaft 8 by means of a suitable coupling 20^a is a stationary tube 20, which is supported in a clamp-bearing 20^b and is in communication with a source of water-supply, this tube being provided beyond the bearing with a stop-cock 21, the stem of which is provided with an upwardly-projecting handle 22, which is adapted to be alternately struck by arms 24, secured to the rod or bar 10 as said bar reciprocates, and thereby open and close the cock.

Connected with the rod or bar 10 at 12^a is a rope 25, which passes over a pulley 26, journaled on the adjacent box 9^a, and has secured to its free end a weight 27.

The numeral 28 denotes a horizontally-adjustable collar mounted upon shaft 8 and provided with a set-screw 29.

The operation is as follows: When in its normal position, the bar 10 is normally held outward to its fullest extent by the weight, the sleeve 14 fitting over and inclosing the tube 17 and sleeve 18, the chain being wound around the rod or tube 17. By means of the motor and the sprocket wheels and chain a rotary movement is given to the shaft 8 and the brush. The mouth of a bottle is then inserted in the funnel-mouth 15 and pressure applied thereto, which will cause the rod or bar 10 and sleeve 14 to be moved inwardly, uncovering the chains forming the brush, which will be projected into the bottle and by their centrifugal action thoroughly cleanse the same. At the same time the inner one of the arms 24 will strike the handle of the cock 21, opening the same and allowing water from the source of supply to be forced into the bottle through stationary tube 24 and hollow shaft 8 and tube 18. When the inner end of sleeve 14 strikes the collar 28, which is adjusted to correspond with the length of the bottle, the pressure upon the bottle is then relieved and the rod 10 and the sleeve 14 returned to normal position by means of the cord and weight, the outer arm 24 striking the handle of the cock and closing the latter.

The arms 24 are to be so constructed with respect to the handle of the stop-cock as to

open the latter just after the bottle has commenced its inward movement and to close the same just before it has stopped in its return movement, as shown in Fig. 2.

5 From the above it will be seen that bottles can be very expeditiously cleaned, as there are no valves or cocks to be opened by hand, the only cock in the machine being operated by the movement of the rod or bar 10.

10 It will be noted that the outer arm 24 is longer than the inner one. In normal position the handle of the stop-cock is perpendicular and the cock closed. In operation the inner short arm 24 will strike and depress the said handle and open the cock and in its return movement will move past the same without touching it. The outer long arm, however, will strike the handle and return the same to normal position, thus closing the cock.

20 Having thus described my invention, what I claim is—

1. In a bottle-cleaning machine, the combination, with the revolving tubular shaft having a brush at one end and a pipe or tube communicating therewith and with a source of supply and provided with a stop-cock having an operating-handle, of the horizontally-movable rod or bar having arms at one end adapted to alternately strike said handle to open and close the stop-cock and at its other end connected with a sleeve having a funnel-mouth encircling and movable upon said tubular shaft, and means for returning said rod or bar to normal position, substantially as described.

2. The combination of a motor, a sprocket-wheel on the shaft of the motor, a hollow rotatable shaft supported at one side of the motor, a sprocket-wheel on said shaft, a chain connecting the two sprocket-wheels, a stationary supply-pipe connected to the rotatable pipe, a cock in this stationary pipe and provided with an arm, brush mechanism on the outer end of the rotatable shaft, a sleeve on the rotatable shaft at its outer end, a sliding rod adjacent to the tubular shaft, arms on this rod, adapted to alternately engage the arm of the cock, and means for normally returning said sliding rod, substantially as described.

3. The combination of a driving mechanism, a rotatable pipe connected to and rotated by said mechanism, a stationary pipe connected to said rotatable pipe and provided with a cock having an operating-arm, a brush on the outer end of the rotatable pipe, a non-rotatable sliding rod mounted in bearings above the pipes and having a limited longitudinal movement, two depending arms of unequal length secured to this rod and adapted to open and close the cock, and means for returning the rod to its normal position, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLARD M. WISE.

Witnesses:

J. CLINTON HILL,
N. E. HALES.