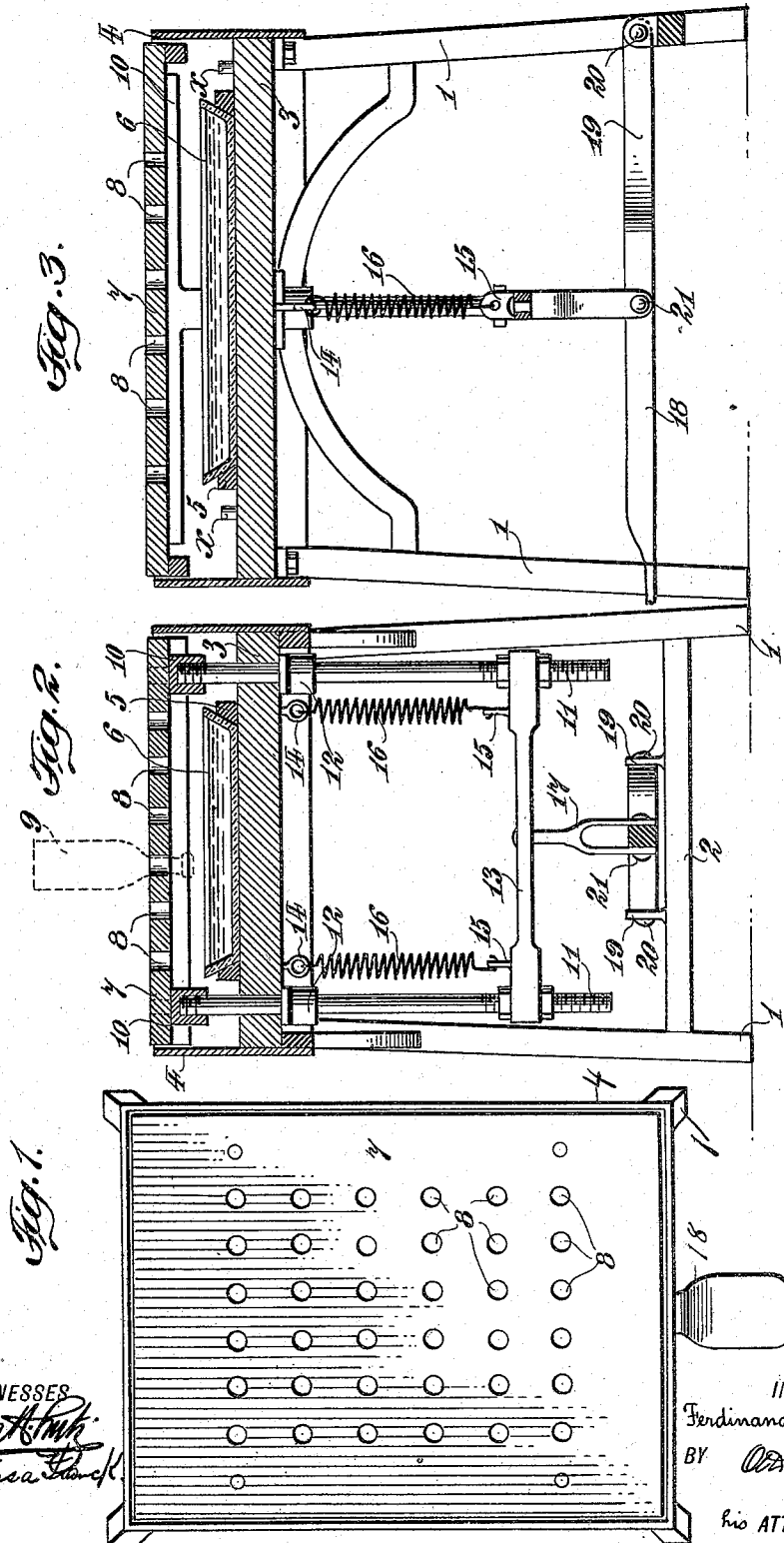


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BOTTLE CLEANSING MACHINE.
APPLICATION FILED NOV. 30, 1908.

930,493.

Patented Aug. 10, 1909.



WITNESSES
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UNITED STATES PATENT OFFICE.

FERDINAND RETZMAN, OF ALMA, NEBRASKA.

BOTTLE-CLEANSING MACHINE.

No. 930,493.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed November 30, 1908. Serial No. 465,353.

To all whom it may concern:

Be it known that I, FERDINAND RETZMAN, a citizen of the United States of America, residing at Alma, Harlan county, Nebraska, have invented certain new and useful Improvements in Bottle-Cleansing Machines, of which the following is a specification.

The present invention relates to a machine for removing rust, dirt, and other foreign substances from the necks and mouths of bottles, for convenience termed a bottle cleansing machine.

In recent years the so-called crown stoppers have come to be very generally used, and these include a metallic cap firmly secured over the bottle mouth and usually contacting with a portion of the neck thereof. After the stoppers have been in place on the bottle for some time, the liquid contents of the bottle enter between the mouth of the latter and the cap, and produce an accumulation of rust and other foreign deleterious substances which must be thoroughly removed before the bottle may be again used. Various means have been heretofore employed for this purpose, but none, so far as I have been enabled to ascertain, has been entirely practical or satisfactory.

The object of my invention is to produce a machine by the use of which rust and other injurious substances may be quickly and thoroughly removed from a large number of bottles simultaneously; a further object being to produce a machine of this kind extremely simple in construction and operation, and which may be cheaply made.

The several novel features of the invention will be hereinafter fully described by the aid of the accompanying drawing, and will be particularly pointed out in the concluding claims.

Figure 1 is a plan view of the machine; Fig. 2 is a vertical sectional view thereof; and Fig. 3 is a side elevational view, the upper part being shown in longitudinal section.

Stated in general terms the invention comprises a support for the bottles to be cleansed, a reservoir containing the cleansing medium, and mechanism for dipping the bottle mouths and necks into the cleansing medium.

Referring to the drawing by reference numerals, 1 designates a frame work consisting of four legs, between two of which a cross bar 2 is secured. The frame work

supports the bed plate 3, which is preferably surrounded by a casing 4 of metal or other appropriate material. Fixed upon the bed plate 3 is a fixed frame 5 which is provided to retain a reservoir 6 for containing the cleansing fluid, which is preferably muriatic acid, although any other fluid, having like cleansing properties, may be employed.

The means for supporting the bottles comprises a plate 7 provided with perforations 8 into which the bottles 9 are placed mouth down. The plate 7 rests removably upon a pair of parallel bars 10, into which are screwed or otherwise secured depending rods 11 passing through perforations in the bed plate 3 and through cylindrical guide sleeves 12 and connected near their lower ends by a cross bar 13. Extending from eyes 14 on the bed plate 3 to similar eyes 15 on the cross bar 13 is a pair of retractile springs 16 having a normal tendency to draw the cross bar and its associated parts in the direction of the bed plate.

Depending from approximately the middle part of the cross bar 13 is a bifurcated link 17, one arm passing at each side of a treadle bar 18, the latter having its rear end bifurcated and terminating in arms 19, each of which is pivoted at 20 to the cross bar 13. The treadle bar 18 is also fulcrumed on a pin 21 passing through it and through the arms of the link 17.

The operation of the machine will be readily understood in view of the foregoing description and the following explanation: When the vessel or reservoir 6 has been filled with the cleansing fluid the perforated supporting plate 7 is placed upon the bars 10 and the bottles, mouth down, are placed in the perforations of the plate. It is to be understood that plates having different sized perforations are furnished in order that different sized bottles may be cleansed. After the bottles are in position the treadle bar 18 is depressed, thereby drawing downwardly the supporting plate 7 causing the parallel bars 10 to strike upstanding pins α on the bed plate, dipping the bottle mouths in the fluid, and thus practically instantaneously removing all rust and deleterious substances.

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

1. In a bottle cleansing machine, the combination with a depressible bottle supporting plate, of a reservoir adapted to contain a

cleansing medium, supporting means for said reservoir and means for depressing the supporting plate to dip the mouths and necks only of the bottles into the cleansing medium.

5 2. In a bottle cleansing machine, the combination with a perforated bottle supporting plate adapted to retain bottles mouth down in the perforations therein, of a reservoir
10 adapted to contain a cleansing medium arranged adjacent the bottle supporting plate, supporting means for said reservoir and means for moving the supporting plate to dip the mouths and necks only of the bottles
15 into the cleansing medium.

3. In a bottle cleansing machine, the combination with a supporting frame, of a bed plate carried thereby, a frame upon the bed plate, a reservoir removably resting within

and held against lateral movement by, the 20 last named frame, a perforated bottle supporting plate, and means for depressing the latter toward the reservoir.

4. In a bottle cleansing machine, the combination with a supporting frame, of a bed 25 plate carried thereby, a reservoir upon the latter, reciprocating rods passing through said bed plate, a bottle supporting frame carried by said rods, and means for reciprocating the rods to depress the bottle support- 30 ing frame toward the reservoir.

In testimony whereof I have affixed my signature in presence of two witnesses.

FERDINAND RETZMAN.

Witnesses:

ESKER M. COX,
W. G. HASKELL.