

S. VOLZ.
BOTTLE RINSING MACHINE.
APPLICATION FILED JAN. 27, 1903.

951,466.

Patented Mar. 8, 1910.
2 SHEETS—SHEET 1.

Fig 1

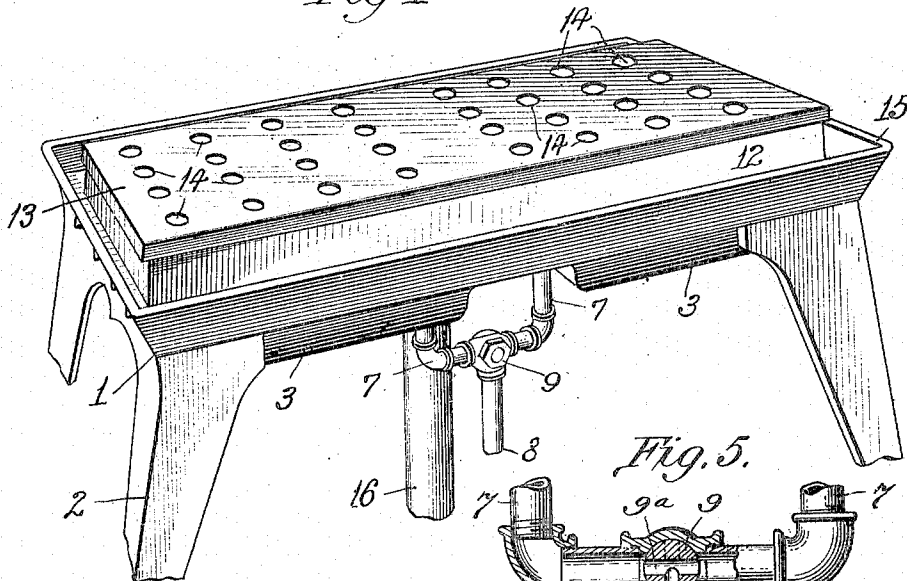


Fig. 5.

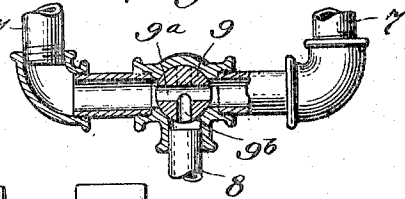
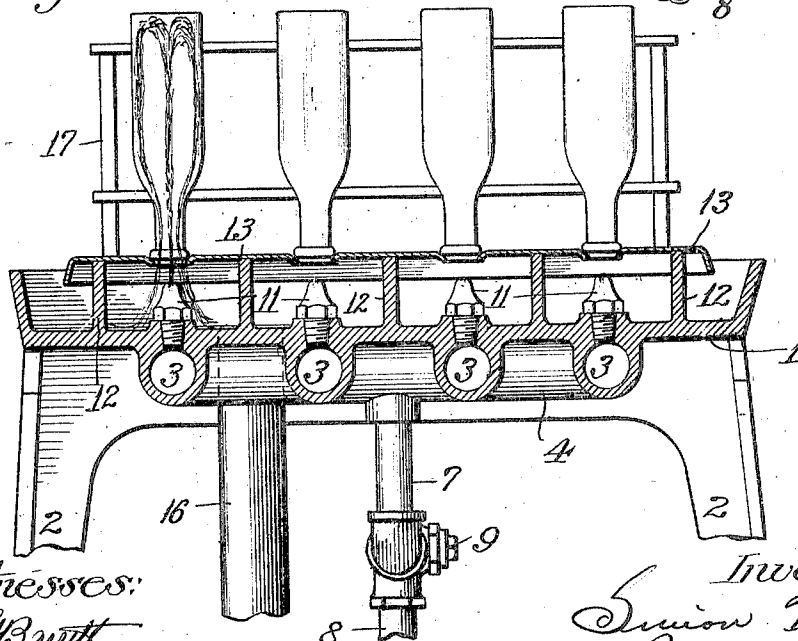


Fig. 2.



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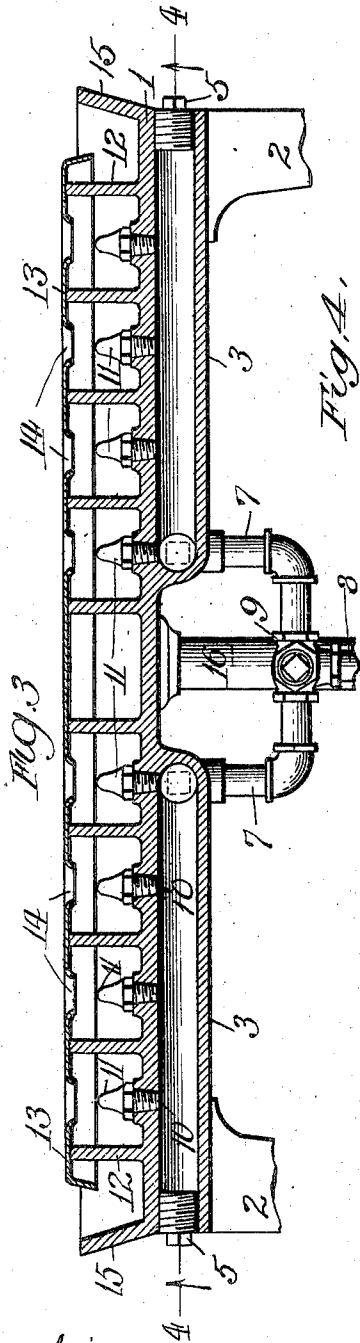
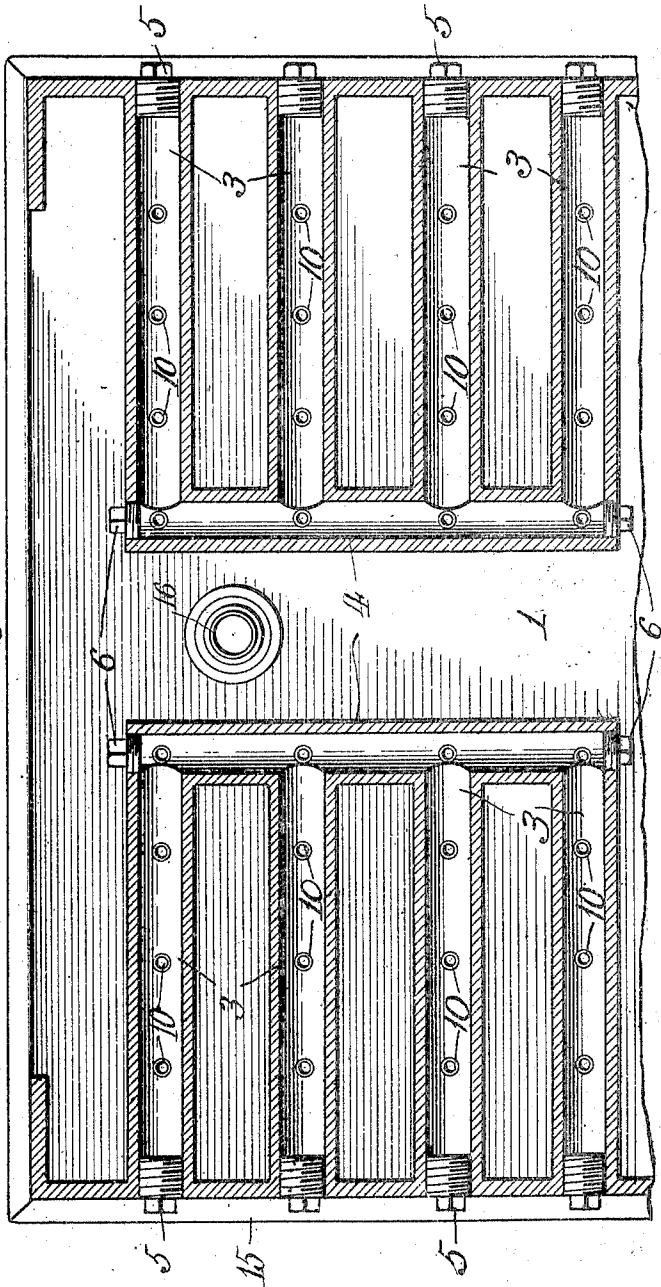


Fig. 4.



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UNITED STATES PATENT OFFICE.

SIMON VOLZ, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE 20TH CENTURY MACHINERY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BOTTLE-RINSING MACHINE.

951,466.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed January 27, 1903. Serial No. 140,728.

To all whom it may concern:

Be it known that I, SIMON VOLZ, residing at Milwaukee, Milwaukee county, Wisconsin, have invented certain new and useful Improvements in Bottle-Rinsing Machines, of which the following is a specification.

My invention relates to a machine for rinsing bottles by means of jets of water directed into such bottles while in inverted position and has for its object the provision of a novel and efficient construction of machine of that character whose features of advantage and utility will be apparent from the description hereinafter given.

In the drawings, Figure 1 is a perspective of my machine; Fig. 2 a cross-section thereof; Fig. 3 a longitudinal section thereof, Fig. 4 a section plan on line 4-4 of Fig. 3, and Fig. 5 a cross section of the controlling valve 9.

My machine comprises essentially a table carrying a series of water nozzles or spouts, above which is arranged a supporting plate having bottle openings registering with the nozzles or spouts and adapted to receive the mouths of the bottles and below which is a series of water conduits for supplying water to the nozzles.

In the present instance, my machine, in general outline, is table-shaped by reason of the table proper or nozzle supporting plate 1 and the legs 2. By preference, this table is a casting in which are also cast a series of water supply pipes 3 extending longitudinally of the machine about half way thereof and joined at their inner ends by a manifold or header 4, all as clearly shown in Fig. 4. There are thus two sets of these pipes and headers, one on each side of the central cross-line of the machine. The outer ends of the pipes are closed by screw plugs 5, while the ends of the headers may be closed by similar plugs 6, one set of which may be removed when the supply pipes 7 are attached, Fig. 3. These two pipes 7 are controlled in their communication with the main supply pipe 8 by a suitable valve 9. At equally spaced distances, holes 10 are provided through the table so as to communicate with the water supply below and into such holes are screwed the nozzles or spouts 11 arranged to deliver jets of water upwardly. Thus, each pipe 3 and manifold 4 communicates with a series

of these nozzles, which are underspouts owing to their peculiar relation with respect to the bottles, as hereinafter explained.

Formed on or attached to the table and projecting upwardly therefrom are a series of ribs or posts 12, on the tops of which rests a bottle-supporting plate 13 made preferably of thin sheet metal. This plate 13 is provided with a series of apertures 14 registering with the nozzles 11 and arranged a certain distance above such nozzles as determined by the height of the ribs 12. The edges of these apertures are flanged or rolled inward in such manner as to receive and support the mouth of the inverted bottles, with the result that the jets of water will be discharged into the bottles. By preference, the edges of the bottle-supporting plate are downwardly bent or flanged. The table is provided with an upward flange 15 to form a pan adapted to collect the water used in rinsing the bottles and conduct it to an outlet communicating with a drain pipe 16. This pan, formed by the table and the flange, it will be observed, is inclosed between the water supply pipes or passages and the bottle supporting plate, so that the supply pipes are on the outside of the pan and in an easily accessible position.

In practice, the bottles are carried or assembled in a suitable bottle carrier or rack 17, as seen in Fig. 2, which is arranged to hold preferably sixteen bottles, that is, half the capacity of my machine, although such capacity may be changed as desired. If the bottle carrier is of one-half the capacity of the machine, as described, the water supply valve 9 is of such construction as to admit water into, say the left hand pipe 7, Fig. 3, and to shut it off from the right hand pipe. If, however, two of these bottle racks are used at a time, the valve 9 is such as to admit water simultaneously through both pipes 7. To this end the valve 9 may be made as shown in detail in Fig. 5, wherein the body of the valve has a diametrical or cross passage 9^a and a radial communicating passage 9^b. When the valve is in the illustrated position both pipes 7 and consequently both sections of nozzles simultaneously receive water from the supply pipe 8, but when turned a quarter in one direction or the other, one or the other of such

pipes and sections receive water. A half turn of the valve will entirely cut off communication of the water to both pipes 7.

When the bottles to be rinsed or washed are in place and the water supply turned on, the water will be jetted into the bottles in the general manner indicated in Fig. 2. The spouts themselves are entirely below the lower end or mouths of the bottles, so that the water alone is projected into the bottles. The water, entering the bottles axially, strikes the inner bottoms thereof and, being deflected laterally, runs down the sides of the bottles and escapes through the necks in an annular stream. The water then falls upon the table and is conducted to the outlet or drain.

I claim:

1. A bottle rinsing machine comprising a series of water supply conduits having nozzles adapted to direct streams of water upwardly, and a support for the inverted bottles having a series of openings which register with said nozzles, the support being provided with means for holding said bottles in register with the openings and with their mouths above the nozzles.

2. A bottle rinsing machine comprising a series of water supply conduits having nozzles adapted to direct streams of water upwardly, and a support having a series of openings which register with said nozzles, said openings being inwardly flanged to support the inverted bottles with their mouth portions directly above the nozzles but prevent their neck portions from passing through the support.

3. A bottle rinsing machine comprising a bottle-supporting plate having a series of openings for the mouths of the inverted bottles, in which openings the mouths rest but through which they do not pass, a table having an upwardly directed marginal flange to form a pan and having a series of water pipes or passages, nozzles or spouts arranged on the table and communicating with said water supply to supply water to the bottles, and a drain pipe for draining the water from the table.

4. A bottle rinsing machine comprising a bottle supporting plate having a series of

openings for the mouth of the inverted bottles, the edges of which openings are flanged inwardly, and underspout nozzles arranged below the mouths of the bottles and adapted to project jets of water into such bottles.

5. A bottle rinsing machine comprising a table having nozzles for projecting jets of water upwardly, supports extending upwardly from the table, and a bottle-supporting plate mounted on said supports and having inwardly flanged openings registering with said nozzles and arranged to receive and support the mouths of the inverted bottles above such nozzles.

6. In a bottle rinsing machine, the combination, with a table provided with a series of water supply conduits having outlets opening upwardly, the top of said table forming a receptacle for receiving and draining away the water with which the bottles are rinsed, a series of nozzles arranged in said conduit outlets and adapted to direct streams of water upwardly into the inverted bottles, supports rising from said table, and a plate on said supports and provided with a series of openings adapted to receive the mouths of the inverted bottles and registering with said nozzles.

7. A bottle rinsing machine comprising a table having in its body a series of water supply conduits provided with upwardly directed outlets adapted to direct streams of water upwardly into the inverted bottles and a supporting plate having a series of openings registering with said water outlets and flanged to receive and support the mouths of said bottles.

8. A bottle rinsing machine comprising a table, a series of water supply conduits, a series of ribs formed integral with said table, said conduits having openings adapted to direct jets of water upwardly, and a bottle supporting plate supported upon said ribs, said supporting plate having apertures registering with said openings and adapted to receive the mouths of the bottles.

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Witnesses:

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