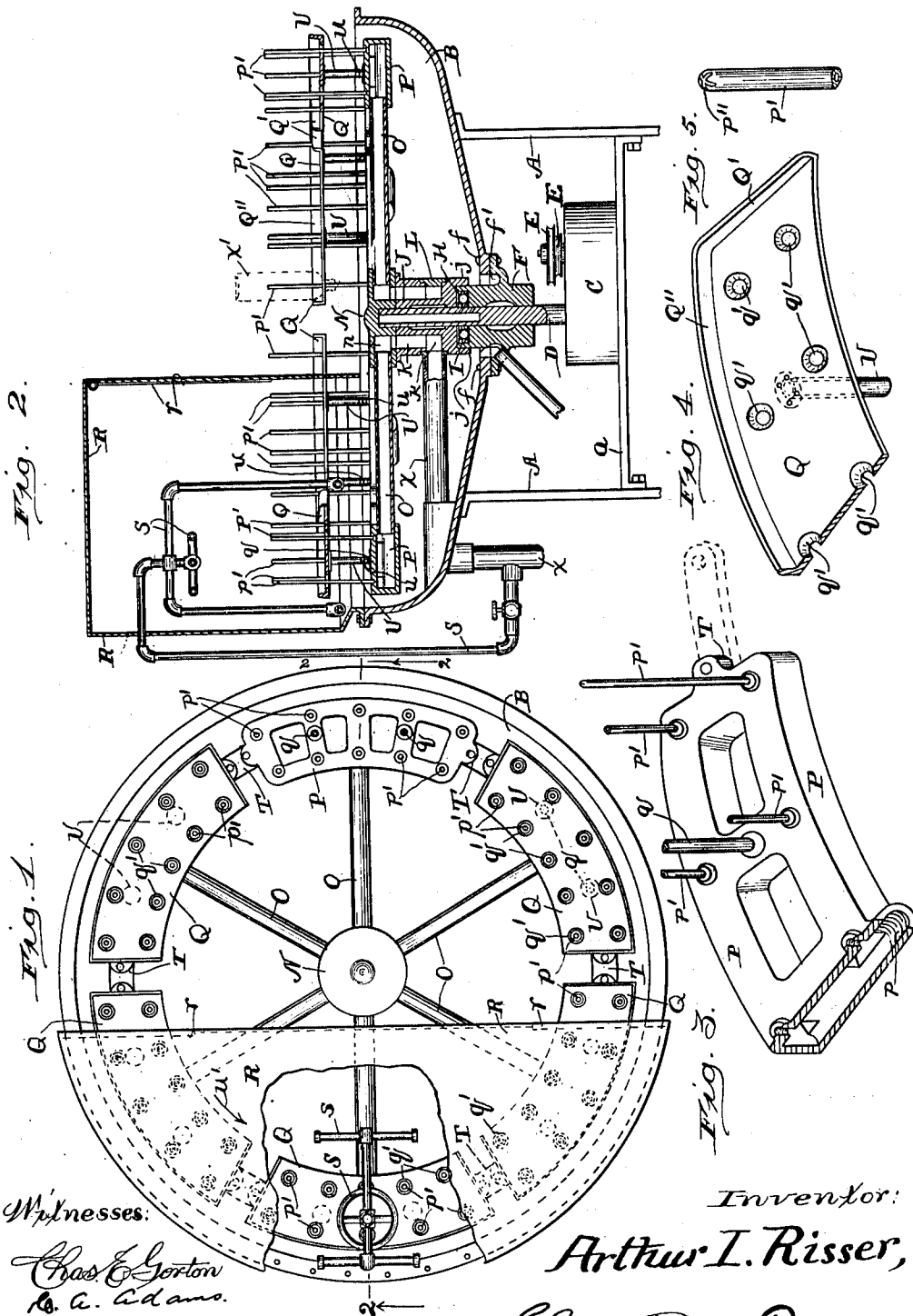


A. I. RISSE.  
BOTTLE WASHING MACHINE.  
APPLICATION FILED OCT. 16, 1911.

1,048,885.

Patented Dec. 31, 1912.

2 SHEETS-SHEET 1.



Witnesses:

Chas. E. Gorton  
A. A. Adams.

Inventor:

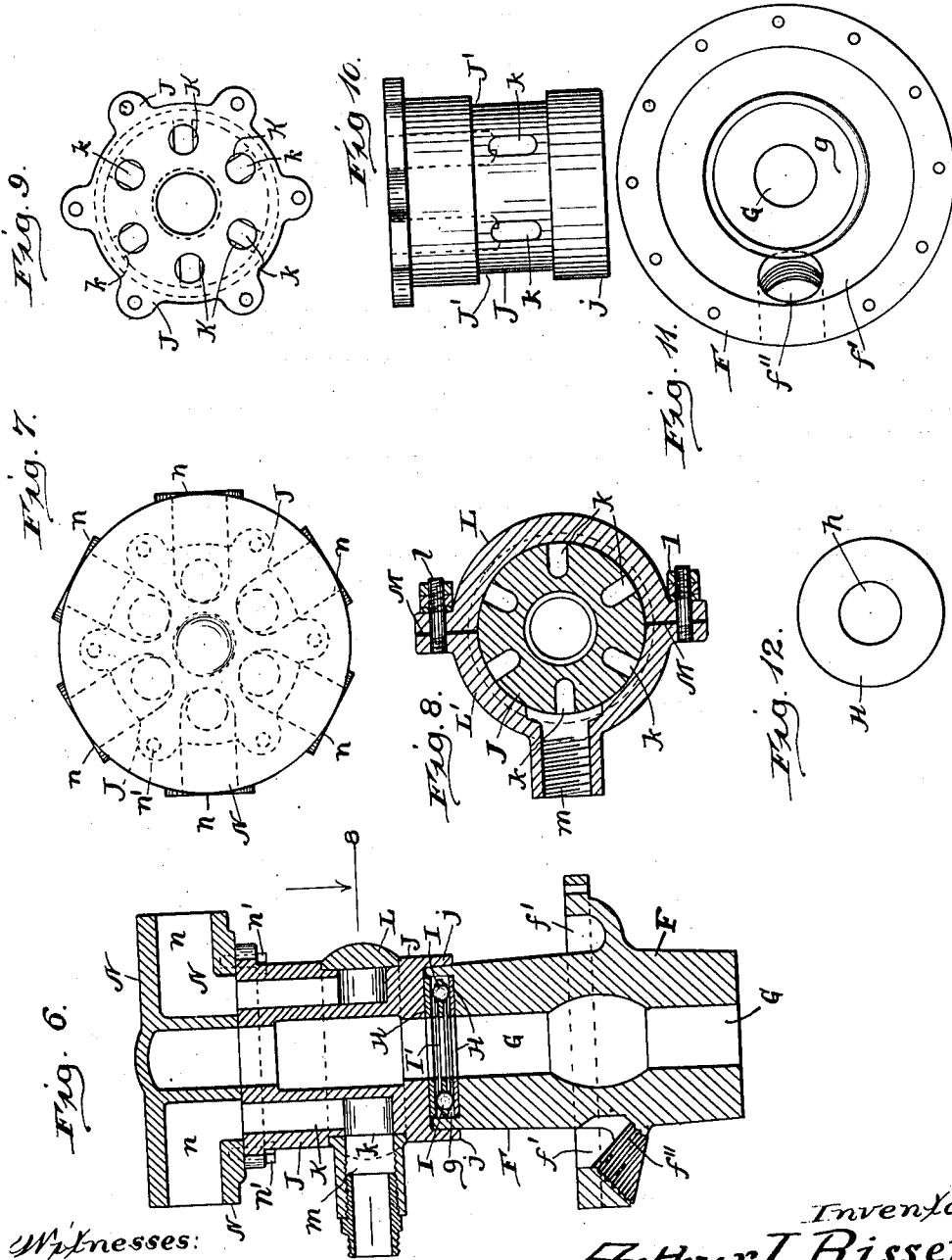
Arthur I. Risser,

By Charles Turner Brown, Atty.

A. I. RISSE.  
BOTTLE WASHING MACHINE.  
APPLICATION FILED OCT. 16, 1911.

Patented Dec. 31, 1912.  
2 SHEETS—SHEET 2.

1,048,885.



Witnesses:

Chas. E. Gorton.  
C. A. Adams.

Inventor:  
Arthur I. Risser

By Charles Tanner Brown

# UNITED STATES PATENT OFFICE.

ARTHUR I. RISSEK, OF CHICAGO, ILLINOIS.

## BOTTLE-WASHING MACHINE.

1,048,885.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed October 16, 1911. Serial No. 654,953.

### *To all whom it may concern:*

Be it known that I, ARTHUR I. RISSEK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bottle-Washing Machines, of which the following is a specification.

This invention relates to machines used for washing bottles.

The object of the invention is to obtain a device operating continuously and on which bottles may be placed to be washed and from which they may be taken when washed, which will be durable, not liable to get out of order, economical in construction and easily operated.

A further object is to obtain a device which may be used for washing the inside and outside of different sized bottles, and by means of which the inside of the bottles will be thoroughly cleaned.

In the drawings Figure 1 is a top plan view of a washing machine embodying the invention, with a portion of the hood of the device broken away to expose to view the operative parts thereunder. Fig. 2 is a vertical section on line 2—2 of Fig. 1, viewed in the direction indicated by the arrows. Fig. 3 is a perspective view of a portion of a hollow section forming an element of the device. Fig. 4 is a perspective view of a portion of a shelf forming an element of the device. Fig. 5 is a perspective view of the upper part of a vertical water delivery pipe forming an element of the device. Fig. 6 is a vertical section, on an enlarged scale, of the central bearing of the device, viewed in the same direction as in Fig. 2. Fig. 7 is a top plan view of the central bearing illustrated in Fig. 6. Fig. 8 is a horizontal section on line 8—8 of Fig. 6, viewed in the direction indicated by the arrows. Fig. 9 is a top plan view of a cap, provided with passage ways and forming an element of the central bearing of the device. Fig. 10 is an elevation of the cap illustrated in Fig. 9. Fig. 11 is a top plan view of the casting forming the bottom and non-rotating member of the central bearing, and Fig. 12 is a top plan view of a perforated disk, duplicates of which form the supporting tables of the ball bearing member of the device.

Similar letters refer to similar parts throughout the several views.

A, A, are legs supporting the large bowl B.  $\alpha$  is a cross bar secured to legs A and supporting the speed reducing member C.

D is a vertical rotatably mounted shaft.

E, E, are the driving pulleys of the speed reducing member C. Rotation of pulley E rotates the vertical shaft D at a considerable lower rate of speed than that at which said pulley E rotates.

F is the stationary and ball bearing supporting member of the central bearing of the device and is rigidly secured to bowl B, by rivets or bolts  $f$ .

$f'$  is an annular groove in casting F and  $f''$ , (see Figs. 6 and 11) is a screw threaded discharge way communicating with the annular groove  $f'$ .

G, (see Figs. 6 and 11), is the journal bearing in casting F for vertical shaft D.

$g$  is a recess at the upper end of casting F, and H, H, (see Figs. 2, 6, and 12), are disks of hardened steel, respectively provided with aperture  $h$  through which the shaft D extends.

I, I, are steel balls of the ordinary kind. I', Fig. 6, is a ball retaining device.

J is a rotatable member provided with annular groove  $J'$ .

To assemble the central bearing one of the plates H is placed in recess  $g$ , balls I in ball retainer I' are placed thereon, and an additional plate H is placed on said balls. The rotatable member J is rigidly secured to shaft D, placed on the upper plate H, (resting thereon), and is rotated by the rotation of said shaft. Member J is provided with the annular flange  $j$  at the lower end thereof, the function of said flange being simply to prevent water getting into the ball bearing of the device.

K, K, are vertical passage ways in member J and  $k, k$ , are horizontal apertures respectively communicating with the vertical passage ways K.

L, L', are separable members with rubber plates M placed between them, which are joined by bolts  $l$  and secured in groove  $J'$  of member J to form the water intake of the device.

$m$  is the inlet to the water intake. Inlet  $m$  is connected to supply pipe X, which is in communication with a suitable source of

water supply, under pressure. As the apertures  $k$  are successively turned to register with the inlet  $m$ , water is forced into said inlet and into the communicating vertical

5 passage ways K.

N is a cap which is provided with passage ways  $n$  registering with the passage ways K, respectively. Cap N is rigidly attached to member J by bolts  $n'$ . The discharge

10 ends of passage ways are screw threaded and O, O, are pipes secured therein.

P are hollow heads (provided with inlets), which are respectively attached to the outer ends of pipes O.

15  $p'$  are vertical water distributors or washers secured in heads P, and are provided at their upper ends with the discharge nozzles  $p''$ .

Q are bottle supporting tables, supported

20 on posts  $q$ , which are secured in hollow members P. Tables Q are provided with apertures  $q'$  which are concentric with pipes  $p'$  through which the neck of a bottle which is to be washed is passed, with one of said

25 vertical water distributing pipes  $p'$  in said bottle, and the shoulder of the neck of said bottle resting on said table. The tables Q are respectively made of sheet metal with the ends  $Q'$  and one of the sides  $Q''$  turned

30 up to retain the body part of said tables in a horizontal plane. U are tubes secured to said tables, (Figs. 2 and 4). Tubes U fit over the posts  $q$ , on castings P. The tables Q are thus made removable from the posts

35  $q$ , and by dropping washers  $u$  over said posts before placing tubes U thereon the tables are raised to permit small bottles to rest thereon with the necks thereof in apertures  $q'$ , and said posts not in contact with the

40 bottom of said bottles.

R is a hood provided with flexible curtains  $r, r$ .

S are water distributing pipes underneath the hood R, which are in communication

45 with water supply pipe X. Water distributing pipes S are arranged so that the water discharged therefrom is directed onto the outside of bottles on tables Q when said tables and bottles thereon, are underneath

50 the hood R.

T are ties connecting adjacent ends of hollow heads P.

X is the water supply pipe of the device. X', Fig. 2, the broken lines indicating a

bottle on table Q.

The operation of the device is:—A driving belt is put on the pulley E and shaft D is driven at a suitable speed, turning head J, cap N, radial pipes O, hollow heads P and tables Q around therewith. An inlet  $k$

60 registers with intake  $m$ , water from supply pipe X is forced into passage ways K and  $n$ , through a pipe O into its hollow head P and from thence through the nozzle  $p''$  of the discharge pipes  $p'$ . At the time of the

65 flow of water into and through a given hollow head P, as last above described, said head will be well within the hood R.

The bottles to be cleaned are placed on the table Q of a given head P before said head

70 and table enter the hood R. As said bottles move through the hood, say in the direction indicated by arrow  $w'$ , Fig. 1 on the outside thereof they receive water discharged

75 from pipes S, and on the inside water discharged from nozzles  $p''$ . The bottles are therefore cleansed on the inside by the water from nozzles  $p''$  and on the outside by the water from pipes S. As the heads P, tables Q, and bottles X' thereon emerge from

80 underneath the hood R said bottles are removed from the tables, and additional bottles are placed thereon before said heads and tables are again moved under said hood.

I claim:—

In a bottle washing machine provided with a plurality of hollow rotatable bases, means to rotate said bases and means to supply water to the hollow bases during a given

90 travel thereof while rotating, the combination of vertical pipes on and communicating with said bases, standards mounted on said bases, sheets of metal on said standards, said sheets provided with apertures which are

95 concentric to said pipes and through which apertures said pipes extend, the said sheets of metal made of thin material and said standards so disposed as to obtain an elastic horizontal table adapted to support bottles, with the necks thereof in said apertures.

ARTHUR I. RISSER.

In the presence of—

CHARLES TURNER BROWN,  
C. A. ADAMS.