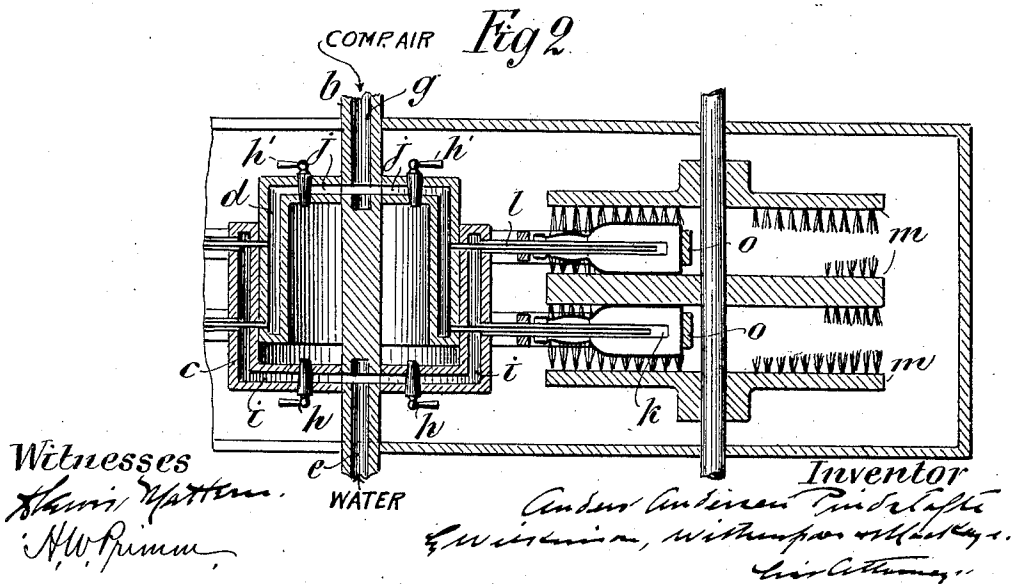
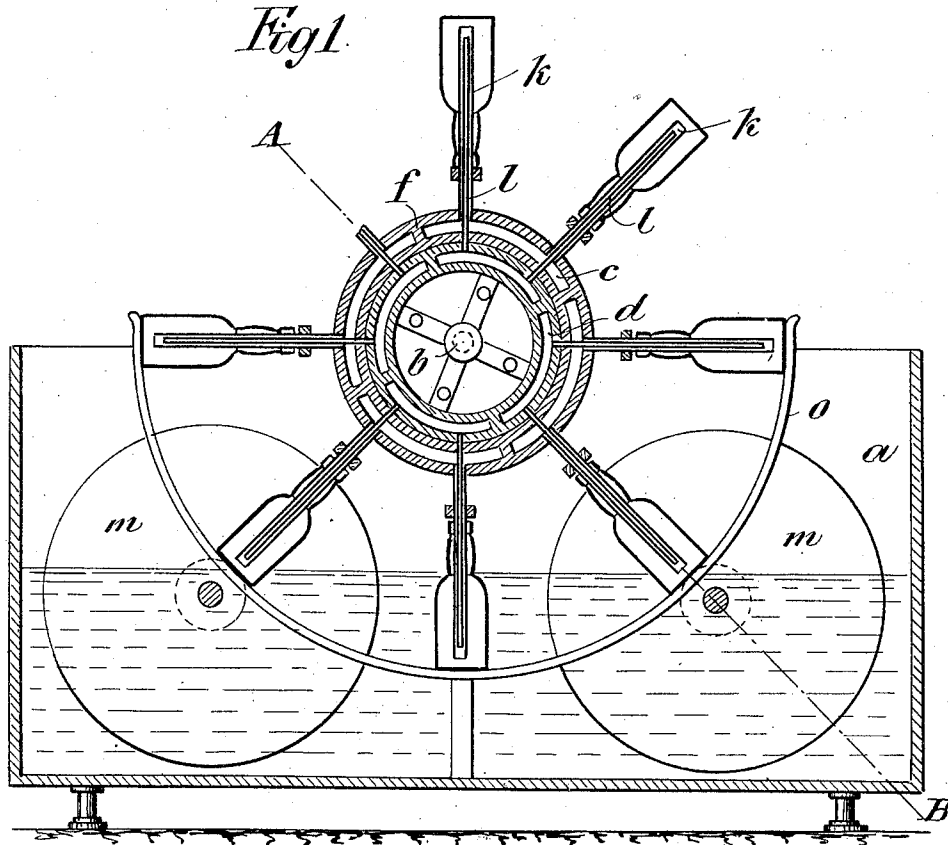


A. A. PINDSTOFTE.
BOTTLE CLEANING MACHINE.
APPLICATION FILED NOV. 19, 1912.

1,059,205.

Patented Apr. 15, 1913.



UNITED STATES PATENT OFFICE.

ANDERS ANDERSEN PINDSTOFTE, OF FREDERIKSBERG, NEAR COPENHAGEN,
DENMARK.

BOTTLE-CLEANING MACHINE.

1,059,205.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed November 19, 1912. Serial No. 732,311.

To all whom it may concern:

Be it known that I, ANDERS ANDERSEN PINDSTOFTE, director, a subject of the Kingdom of Denmark, residing at Frederiksberg Alle 62, Frederiksberg, near Copenhagen, Denmark, have invented certain new and useful Improvements in Bottle-Cleaning 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 invention has for its object an improved bottle cleaning machine, in which the interior of the bottles is cleaned by means of compressed air and liquid and the outer surface of the bottles is cleaned by means of rinse water and rotary brush-disks.

The drawing illustrates a constructional form of the improved machine.

Figure 1 is a vertical section through parts of said machine and Fig. 2 a transverse section on line A—B Fig. 1.

a is the rinse-water reservoir and *b* a horizontal shaft mounted in bearings above said reservoir. On the shaft *b* are mounted two concentrically arranged, ringshaped, independent, closed chambers *c* and *d*, each of which by means of partitions *f* is divided into compartments separated from one another. The ends of the shaft *b* are hollow. The hollow end *e* is connected to a reservoir for water under pressure (not shown) and the hollow end *g* with a compressed air reservoir. (Not shown). The hollow end *e* is through channels *i* provided with cocks *h* connected to each of the compartments of the chamber *c*, and the hollow end *g* is through channels *j* provided with cocks *h'* connected to each of the compartments of the chamber *d*. Rinse pipes *k* and *l* lead from the chambers *c* and *d*, which rinse pipes are in pairs inserted one within another. The bottles are placed on the rinse pipes so that the latter project through the necks of the bottles and into the interior thereof, whereby the bottles are carried by said rinse pipes through which water under pressure and compressed air are supplied to the bottles when the cocks *h* and *h'* are opened.

In the rinse water reservoir rotary brush

disks *m* are arranged, which ordinarily revolve in the opposite direction to the chambers and with greater speed than said chambers. The bottles carried by the rinse pipes pass between said brush disks during the rotation of the chambers, and the bottles are held in position upon the rinse pipes by means of guide rails *o*, which prevent the bottles from leaving the rinse pipes during their passage through the reservoir *a*. The brush disks clean the outer surface of the bottles and simultaneously cause the bottles to rotate around the rinse pipes.

The mixture of liquid and compressed air, entering the bottles when the cocks are opened, cleans the interior of the bottles. During the upward movement of the bottles from the rinse water reservoir water jets may be directed against the outer surface of the bottles.

The constructional details described and illustrated may of course be varied.

Claims.

1. In a bottle cleaning machine in which the interior of the bottles is cleaned by means of compressed air and liquid, the combination with a rinse water reservoir, of two independent closed chambers concentrically mounted on a common, horizontally disposed hollow-ended shaft arranged to rotate above said reservoir, the hollow ends of said shaft being respectively in communication with a source of compressed air and a source of liquid under compression, a plurality of rinse pipes arranged in pairs fitted one within the other leading from said chambers, and channels provided with valves connecting said chambers with the respective ends of said hollow-ended shaft.

2. In a bottle cleaning machine in which the interior of the bottles is cleaned by means of compressed air and liquid, the combination of a rinse water reservoir, two independent closed chambers concentrically mounted on a common horizontally disposed hollow-ended shaft arranged to rotate above said reservoir, the hollow ends of said shaft being respectively in communication with a source of compressed air and a source of liquid under pressure, a plurality of rinse pipes arranged in pairs fitted one within the other leading from

said chambers, channels provided with valves connecting said chambers with the respective ends of said hollow-ended shaft, and rotary brush disks arranged in said
5 reservoir and adapted to cleanse the exterior of the bottles.

In testimony whereof, I affix my signature, in presence of two witnesses.

ANDERS ANDERSEN PINDSTOFTE.

Witnesses:

MARCUS MOLLER,
C. E. SHIRK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
