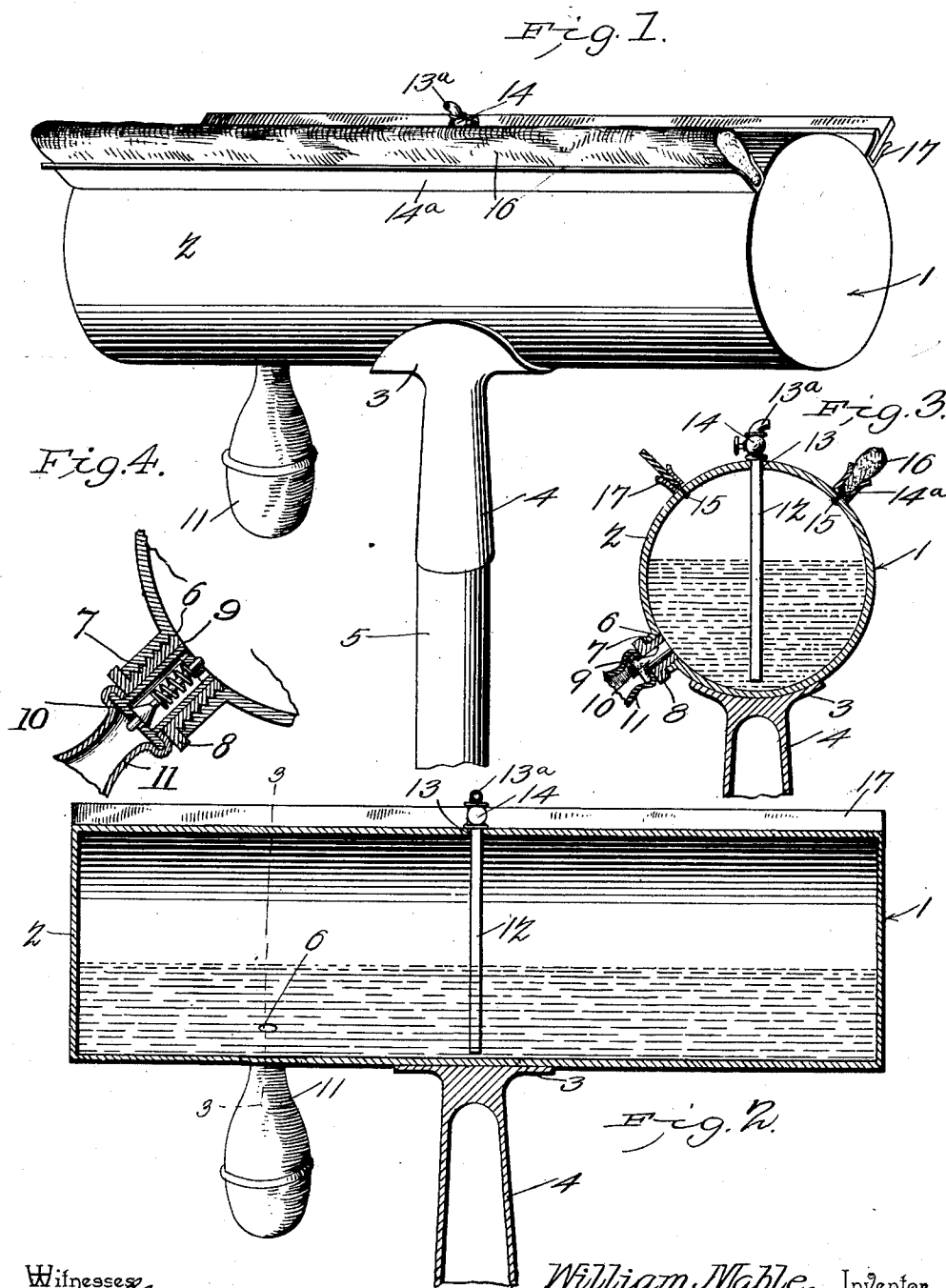


No. 732,205.

PATENTED JUNE 30, 1903.

W. MABLE.
WINDOW CLEANER.
APPLICATION FILED FEB. 3, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM MABLE, OF FORT COLLINS, COLORADO, ASSIGNOR OF ONE-HALF
TO ROBERT J. ANDREWS, OF FORT COLLINS, COLORADO.

WINDOW-CLEANER.

SPECIFICATION forming part of Letters Patent No. 732,205, dated June 30, 1903.

Application filed February 3, 1903. Serial No. 141,714. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MABLE, a citizen of the United States, residing at Fort Collins, in the county of Larimer and State of Colorado, have invented a new and useful Window-Cleaner, of which the following is a specification.

This invention relates to an improved window-cleaner, and more particularly to that class known as "fountain" cleaners, in which a fluid-holding reservoir is employed for supplying the water or other liquid to the surface to be cleaned, and has for its object to provide a simple, inexpensive, and efficient device of this character, the relative disposition of the several parts being such as to render it easy of manipulation and effective in operation.

A further object of the invention is to provide a fountain cleaner having independent washing and drying faces, the fluid in the reservoir being under constant air-pressure and expelled or delivered upon the glass or other surface to be cleaned in any desired quantity and without the use of auxiliary or extraneous pumping or forcing devices.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of the improved window-cleaner constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a transverse section taken on the line 3-3 of Fig. 2, and Fig. 4 is an enlarged detail sectional view of the valve.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the cleaner, which consists of a horizontally-disposed cylindrical water tank or reservoir 2, formed of metal or other suitable material, provided with a reinforcing-flange 3 and a tubular extension 4, in which is removably secured a handle 5. A threaded opening 6 is formed in the bottom of the reservoir 2 and preferably adjacent one end thereof, adapted to receive the threaded extension 7 of a bushing 8. The bushing 8 is

provided with a longitudinal bore or channel 9, in which is seated a check-valve 10, one end of which extends a short distance above the bushing 8 and is provided with a rubber or other compressible bulb 11, by means of which air is forced into the reservoir. The reservoir 2 may be filled with water or other liquid by unscrewing the bushing 8 and introducing the water through the opening 6, after which the bushing is replaced and sufficient air forced into the reservoir by compressing the bulb 11 to put the liquid under the desired pressure.

A pipe or tube 12 passes through an opening 13 in the top of the reservoir and projects downwardly through the reservoir, terminating a short distance from the bottom thereof, the opposite end of the pipe or tube extending slightly beyond the outer wall of the tank or reservoir and being provided with a laterally-turned nozzle 13^a and a valve 14, by means of which the quantity of water or other fluid expelled is regulated.

A pair of longitudinally-disposed outwardly-extending spring-flanges 14^a, forming, in effect, a clamp, are secured in any suitable manner, as by rivets 15, to the outer wall of the reservoir 2, and seated in the groove or channel formed by said flanges is a strip of felt or other absorbent material 16, which forms the washer-face of the cleaner. The parallel spring-flanges 14^a are preferably secured to the reservoir at a point slightly in advance and a short distance below the nozzle 13^a, so that when the water is expelled or forced through the nozzle upon the glass a portion of the water will flow on the felt, thoroughly saturating it. A corresponding pair of parallel spring-flanges 17, adapted to receive a strip of rubber or other suitable material constituting the drier-face, are secured to the reservoir in any suitable manner and are preferably arranged a sufficient distance from the washer-face to allow the rubber strip to come in contact with the glass or other surface to be washed when the cleaner is reversed.

The outer ends of the flanges 14^a and 17 are preferably outwardly curved, as clearly shown in Fig. 3 of the drawings, so as to permit the easy introduction of cleaning-strips.

The construction of the device forming the subject of my invention will be readily understood, and its operation may be described as follows: The reservoir is first partly filled with water or other liquid by unscrewing the bushing and introducing the water through the opening in the tank. The bushing is then replaced, and a sufficient quantity of air is forced into the reservoir by compressing the bulb, as before stated. The valve 14 is now opened, and the pressure of the air in the reservoir causes the water therein to be expelled through the tube 12 and nozzle 13^a upon the window immediately above the washer-face, a portion of the water falling upon the felt and saturating it. The window may now be thoroughly washed by rubbing the washer-face back and forth on the pane, and when it is desired to dry the glass the valve 14 is closed, shutting off the supply of water, and the cleaner reversed, so that the rubber strip will come in contact with the glass, which may be relieved of all moisture and thoroughly dried by rubbing it downwardly with drier. From the foregoing description it will be seen that I have produced a simple inexpensive cleaner, the water in the reservoir being under constant pressure, so as to be expelled upon the glass without the use of auxiliary forcing devices, and the quantity of water expelled being regulated at will by the operator.

Various changes in form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

1. A window-cleaner comprising a liquid-containing reservoir, independent washing and drying faces secured thereto, a liquid-conducting tube one end of which extends within the reservoir the opposite end thereof being provided with a nozzle and regulating-

valve, a compressible bulb communicating with the reservoir for compressing air therein and a check-valve between the bulb and the reservoir.

2. A window-cleaner comprising a liquid-containing reservoir provided withoutwardly-extending parallel spring-flanges adapted to receive a cleaning-strip, a liquid-conducting tube provided with a regulating-valve extending within the reservoir, a compressible bulb for compressing air therein and a check-valve between the bulb and the reservoir.

3. A window-cleaner comprising a liquid-containing reservoir, independent washing and drying faces carried by the reservoir a removable bushing fitting in the liquid-supply opening in the reservoir, a valve carried by the bushing, a compressible bulb secured to the bushing and communicating with the interior of the reservoir for supplying and compressing air therein and a liquid-conducting tube one end of which extends within the reservoir, its opposite end being provided with a nozzle and regulating-valve.

4. A window-cleaner comprising a liquid-containing reservoir, independent washing and drying faces secured thereto, a threaded bushing provided with a check-valve fitting in a correspondingly-threaded liquid-supply opening in the reservoir, a compressible bulb carried by the valve, and a liquid-conducting tube one end of which communicates with the interior of the reservoir at a point intermediate the independent washing and drying faces and its opposite end being provided with a laterally-turned nozzle and regulating-valve.

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

WILLIAM MABLE.

Witnesses:

W. H. MULLIN,
A. A. EDWARDS.