

No. 689,464.

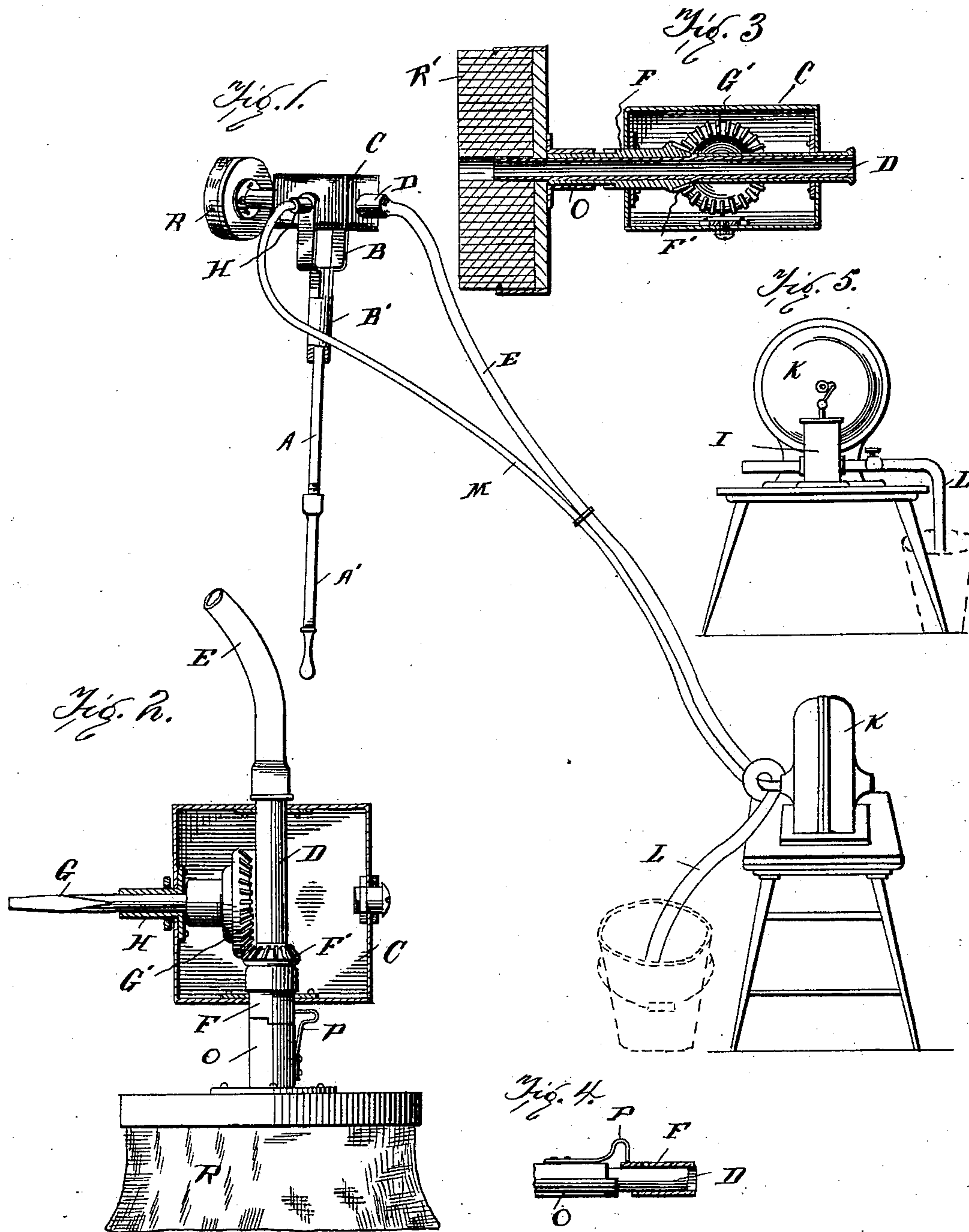
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J. C. CRAMER.

FOUNTAIN BRUSH AND POLISHER FOR WINDOWS.

(Application filed Apr. 18, 1901.)

(No Model.)



Witnesses  
Chas. K. Navies.  
Chas. H. Rodgers.

Inventor  
Jos. C. Cramer  
By W. A. Bartlett  
Attorney



# UNITED STATES PATENT OFFICE.

JOSEPH C. CRAMER, OF LOS ANGELES, CALIFORNIA.

## FOUNTAIN BRUSH AND POLISHER FOR WINDOWS.

SPECIFICATION forming part of Letters Patent No. 689,464, dated December 24, 1901.

Application filed April 18, 1901. Serial No. 56,459. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH C. CRAMER, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Fountain Brushes and Polishers for Windows, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to window-washers.

The object of the invention is to produce a machine by which plate-glass and other windows, ceilings, &c., can be washed and polished without difficulty and with little bodily exertion. The machine is adjustable for various purposes and uses.

Figure 1 is a perspective view of the machine complete for use. Fig. 2 is a section of the gear-casing, showing gear and pump tube in elevation. Fig. 3 is a section of the gear-casing through the feed-spout. Fig. 4 is a section of joint or coupling by which brushes are attached. Fig. 5 is a side elevation of the pump-motor and pump.

25 The handle A is a sectional or extensible staff, stick, or pole, to which a bail or loop B is connected, the handle A entering socket B'. A box or gear-casing C is journaled between the arms of this bail, so that the box can be swung to any position or even reversed between the arms of the bail by removing tube D. Thus the handle A supports the casing C, whether the handle A be held vertically or inclined, and the casing C may be held at an angle with reference to the handle.

35 The casing C may be a square box or short cylinder. A tube D extends through this casing and projects outside the casing at front and rear. This tube D receives a flexible supply-pipe E at the rear or back side of the casing.

40 Around the tube D a sleeve F is journaled, so as to have one end within the casing and the other projecting outside. A bevel-gear F' is on the inner end of the sleeve and rigid therewith.

45 A short shaft G extends through a suitable bearing H in the side of the casing C at right angles to the tube D. Shaft G has a bevel-gear G' fixed thereto, which gear engages the gear F'. Then when shaft G is rotated the sleeve F is rotated also.

The tube E is connected to a pump I, which

pump is driven by a smaller motor K, the power being a weight, spring, or other usual motive power. The pump is connected to the motor in any usual manner. A flexible hose L, attached to the pump, can be placed in a vessel of water or allowed to open to the air, and thus either air or water may be forced through tubes E and D. (Tube D does not rotate, but sleeve F rotates on it.)

55 Connected to the shaft of the motor is a flexible driving-shaft M. This shaft may be loosely supported from tube E, if desirable, but must be free to rotate. Shaft M is connected to shaft G, so that when the motor is running it causes a jet of water or air to pass through tubes E and D by means of the pump and also causes the rotation of sleeve F by reason of the shafts and gear connections described.

65 At the projecting end of sleeve F, I attach a disk, brush, scrubber, pounce, or polisher. Such brush or scrubber may be a brush of wires or bristles with an opening therein, or it may be a swab, cloth, or rubber. The brush or cloth is preferably circular, with a tubular extension or sleeve O at its back. This tubular extension is of the same size as sleeve F and will surround the projecting end of pipe D when applied thereto.

75 Preferably the sleeves O and F will be notched or cut away, so that when placed together the two will form a clutch. Sleeve O has a spring-hook P, which can be hooked into a hole in the sleeve F, and thus clutch the two sleeves together. Then the rotation of sleeve F will cause the sleeve O and rubber or brush R to rotate.

85 The tube D guides and conveys the water or air into the interior of the brush or rubber R, as is usual in what are known as "fountain-brushes."

95 The gear-casing is supported in the hand or by the handle A, with brush R in contact with the pane of glass or surface to be polished. If the height is considerable, extension-pieces A' are used. The face of the brush can be held against the glass by the handle. The motor K drives the brush and may drive the pump to force either water or air through the brush. When tube E is removed from tube D, the pump runs idle.

100 Brushes R and R' of different varieties may



be applied. The preferred sequence is first a brush with water, suds, or chemicals; then a sponge-disk with a chemical solution, which may be allowed to dry; then a drying disk, mop, or swab—say of rolled canvas—and afterward a polishing-cloth. As the rubbers or brushes are easily replaced, it is but a small labor to thoroughly clean and polish a large window with this machine. It may, of course, be used on other surfaces than windows.

What I claim is—

1. The combination with a driving-motor, of a fountain-brush flexibly connected to said motor to be rotated thereby, and a pump driven by the motor and flexibly connected to the brush to deliver air or fluid to the brush.

2. The combination of a supporting gear-casing, a tube passing through the casing, a sleeve on said tube and having a driving-gear thereon, a driving-gear within the casing engaging said sleeve-gear, a brush or scrubber having an opening through its back, and a sleeve on said scrubber provided with a coupler to engage the sleeve carried by the gear-casing, and means for driving the gears in the casing, substantially as described.

3. The combination of the gear-casing, a tube passing through the same, a geared sleeve on the tube having a clutch member outside the casing, a brush having a clutch member at its back to engage said clutch member on said sleeve, and a gear within the casing engaging the sleeve-gear and a driving-stem therefor projecting from the casing, at right angles to the tube, substantially as described.

4. The gear-casing having a tube passing therethrough, a sleeve on the tube having a driving-pinion within the gear-casing and a clutch member projecting from the casing, a fountain-brush having a clutch member for attachment to the projecting clutch member

of said sleeve, means for coupling the brush to the sleeve, and separate means for propelling a fluid through the tube and brush, and for driving the rotary sleeve and brush, substantially as described.

5. In a scrubbing device, the fluid-supply tube, a sleeve journaled thereon and having a clutch member, a fountain-brush having a sleeve projecting from its back and provided with a clutch member, a clasp for joining the sleeve of the brush to the sleeve on the supply-tube, and means for rotating the sleeve and thereby rotating the brush.

6. The combination with the gear-casing, of the supporting journaled bail, a handle connected to the bail, a tube passing through the gear-casing and adapted to receive a supply-pipe, a sleeve on the tube having a gear within the casing and a clutch member projecting from the casing, a driving-gear within the casing engaging said sleeve-gear, and a driving-spindle projecting from the casing at a right angle to the feed-tube, adapted to receive a flexible driving-shaft, substantially as described.

7. A fountain-brush having a passage there-through and having a sleeve projecting from its back and provided with a clutch member, a supporting gear-casing having a tube projecting therefrom and having a sleeve thereon with which the clutch member engages, means for driving the sleeve in the gear-casing, and a pivoted handle supporting the gear-casing, all combined substantially as described.

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

JOSEPH C. CRAMER.

Witnesses:

J. W. KEMP,  
R. W. KEMP.