

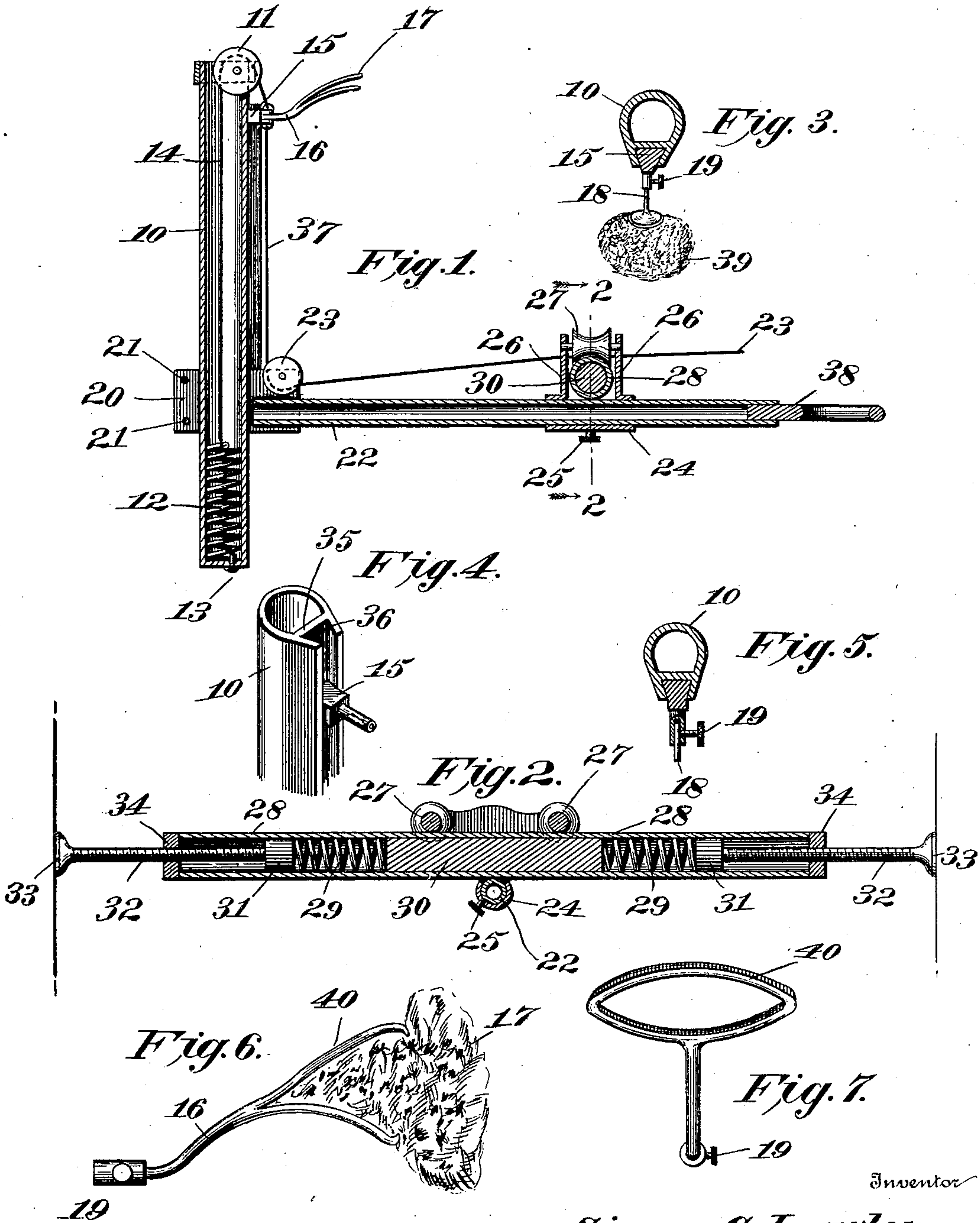
No. 669,420.

Patented Mar. 5, 1901.

S. C. LAWLOR.
MACHINE FOR WASHING WINDOWS.

(Application filed June 26, 1900.)

(No Model.)



Witnesses
Chas. Seavey
Hugh P. Graves

Inventor
Simeon C. Lawlor,

Mason, Fenwick & Lawrence,
Attorneys

UNITED STATES PATENT OFFICE.

SIMEON C. LAWLOR, OF DULUTH, MINNESOTA, ASSIGNOR OF ONE-FOURTH
TO LEONIDAS WEST, OF MINNEAPOLIS, MINNESOTA.

MACHINE FOR WASHING WINDOWS.

SPECIFICATION forming part of Letters Patent No. 669,420, dated March 5, 1901.

Application filed June 26, 1900. Serial No. 21,700. (No model.)

To all whom it may concern:

Be it known that I, SIMEON C. LAWLOR, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Machines for Washing Windows; 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.

This invention relates to improvements in window-cleaners, and particularly to that class of such devices by means of which the outer surfaces of the window may be cleaned by a person operating inside of the house, whereby the exposure and danger of falling from the window-sill is avoided, the object of the invention being to provide an improved device of this class by which the desired operations may be performed in the least possible time and with the least possible expenditure of labor.

With this object in view the invention consists in an improved window-cleaner of the class mentioned, the construction, arrangement, and combination of the parts of which will be hereinafter fully described and afterward specifically set forth in the claims.

In the accompanying drawings, Figure 1 is a longitudinal vertical sectional view through the standard and supporting-arm of a window-washer constructed in accordance with my invention. Fig. 2 is a vertical section through the same on a plane at right angles to the plane of Fig. 1 and parallel with the window-pane, as indicated by the broken line 2 2 of Fig. 1. Fig. 3 is a transverse section through the vertical standard and the sliding block carrying the window-cleaning sponge or brush. Fig. 4 is a fragmentary detail perspective view of the vertical standard and the brush-carrying slidable block. Fig. 5 is a detail sectional view similar to Fig. 3, the brush and parts of its holding-tube being broken away. Fig. 6 is an enlarged detail inside elevation of a sponge-holder to be substituted for the brush when desired, the sponge being shown clamped in the holder. Fig. 7

is a detail view in elevation of the sponge-

holder without the sponge, the sponge-clamping frames being shown in their normally-closed positions.

Like numerals of reference mark the same parts wherever they occur in more than one figure of the drawings.

Referring to the drawings by numerals, 10 indicates a hollow vertical standard, which in the actual operation of the device stands outside of the window-frame. This standard may or may not be closed at the bottom, as shown, and is provided with a pulley 11, journaled in a notch or slot at its upper end.

12 indicates a spring located in the lower end of the vertical standard and secured to the bottom thereof by a bolt 13 or any other suitable means.

14 indicates a cord secured to the upper end of the spring 12 and passed upward through the standard over the pulley 11 and downward outside the standard, its end being secured to a block 15, slidably mounted upon the standard in a manner hereinafter described. A clamp 16, adapted to carry a sponge 17 or a brush 18, is secured to said block 15 by a set-screw 19 or other suitable means.

20 indicates a coupling formed of two parts adjustably clamped in position around the vertical standard 10 by means of screws 21, said clamp being provided with a socket to receive a horizontal tube 22 and having a pulley 23 journaled above said socket.

24 indicates a sleeve mounted upon the tube 22 and secured in position by set-screw 25 or other suitable means. This sleeve carries a frame consisting of two uprights 26, in which are journaled two rollers 27. A tube 28, passed between the uprights 26 of the sleeve or frame, is adapted to be fixed between the opposite faces of the sides of the window-frames by means of springs 29 within said tube, having their inner bearings against the ends of a block 30 and their outer bearings against the inner ends 31 of screws 32, provided with suitable heads 33, held normally in contact with the sides of the window-frame and pressed into rigid contact therewith by means of nuts 34 on said screws bearing against the outer ends of the tube 28. Some

of these features are similar to like parts shown and claimed by me in my application for patent of even date herewith, Serial No. 21,699.

5 The vertical standard 10 is of peculiar construction, being of horseshoe shape in cross-section with a flat partition 35 connecting the two sides, leaving an undercut or dovetail longitudinal groove 36 outside of said partition or side 35. The block 15 is dovetailed
10 to fit in said groove and slide freely therein. A cord 37 is secured to the bottom of the block 15 and passes downward under the pulley 23 in the coupling 20 and inward to with-
15 in easy reach of the operator standing inside the room. Any suitable form of handle, as at 38, may be secured to the tube 22 for convenience in operating the device. The brush
20 39 or body of the brush 18 is permanently secured to the stem, while the sponge 17 is removably secured between spring clamping-frames 40 of elliptical shape, which are normally held closed together, as shown in Fig. 7.

In the operation of the tube 22, carrying
25 with it the vertical standard 10 and the brush or sponge clamp movable horizontally on the fixed tube 28, the rollers 27 of the carriage permit of easy movement thereof without cramping, whereby the sponge or brush can
30 be moved laterally across the window-pane, so as to be in position to be vertically reciprocated over all parts of the surface of the panes by means of the cord 37 and spring 12. The
35 inward drawing of the cord draws the sliding brush-carrying block 15 downward, extending the spring 12, and the recoil of the spring when the coil is released moves the brush-carrying block 15 upward.

Having thus fully described my invention,
40 what I claim as new, and desire to secure by Letters Patent, is—

1. In a window-cleaner, a hollow vertical standard horseshoe-shaped in cross-section and provided with a partition connecting its
45 two sides at a short distance from the edges thereof forming a dovetail vertical groove, in combination with a dovetail block slidably fitted in said groove, a window-washing device carried by said block, and means for reciprocating the block in said groove, substantially as described.

as described.

2. In a window-cleaner, a hollow vertical standard horseshoe-shaped in cross-section and provided with a partition connecting its two sides at a short distance from the edges
55 thereof forming a dovetail vertical groove, in combination with a dovetail block slidably fitted in said groove, a window-washing device carried by said block, a pulley journaled in the upper end of the vertical standard, a
60 coupling adjustably secured near the lower end of the standard, a pulley journaled in said coupling, a spring secured in the lower end of the standard, a cord secured to the upper end of the spring passing over the upper pulley and secured to the dovetail block,
65 and a cord secured to the dovetail block and passed downward under the pulley on the coupling, substantially as described.

3. In a window-washer, the combination
70 with a tube, adapted to be secured between the inner faces of the sides of the window-frame, a horizontal tube at right angles to the fixed tube and carrying a window-washing device, a collar adjustably fixed upon the
75 horizontal tube, uprights secured upon said collar and embracing the fixed tube, and two rollers journaled in said uprights and bearing at different points on the upper face of the fixed tube, substantially as described. 80

4. In a window-washer, the combination of a vertical hollow standard formed of a piece bent and drawn nearly together at its edges, a partition near its front edges for holding the piece thus together and forming an interior inclosed vertical passage-way and an exterior vertical dovetailed groove along the
85 said standard, a slidable dovetailed block fitted in said groove, means for interchangeably securing a brush or sponge clamp to said block, and means for reciprocating the block in the groove, substantially as described. 90

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

SIMEON C. LAWLOR.

Witnesses:

H. F. L. CARHART,
WM. MCKAY.