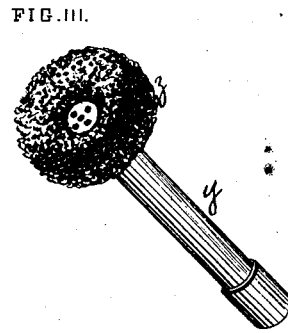
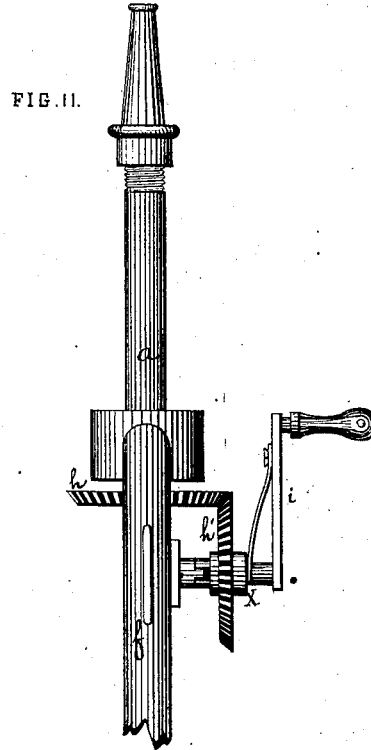
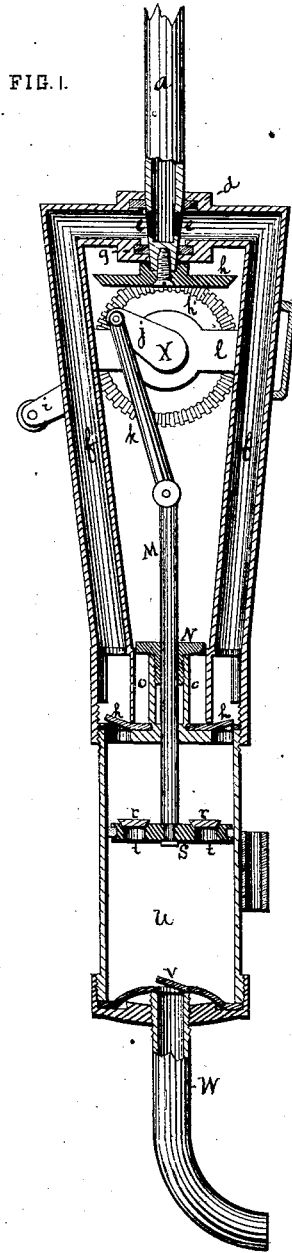


C. H. SMITH.
Window-Washer.

No. 162,318.

Patented April 20, 1875.



WITNESSES.

R. K. Evans
Chas. H. Smith

INVENTOR.

Chas. H. Smith
by his attys.
Evans, Comstock & Co

UNITED STATES PATENT OFFICE.

CHARLES H. SMITH, OF FARIBAULT, MINNESOTA.

IMPROVEMENT IN WINDOW-WASHERS.

Specification forming part of Letters Patent No. **162,318**, dated April 20, 1875; application filed August 12, 1874.

To all whom it may concern :

Be it known that I, CHARLES H. SMITH, a resident of the city of Faribault, county of Rice and State of Minnesota, have invented certain new and useful Improvements in Window-Washer, of which the following is a clear, full and exact description, the drawings annexed hereto being made a part of this specification.

The object of my invention is to produce a neat, complete and convenient form of washer with a revolving brush upon its outer end, to be used for washing windows, and for other purposes to which it may be practically applicable.

Figure 1 is a longitudinal center section of my machine. Fig. 2 is a detail. Fig. 3 is a detail.

The same letters are used in the various figures in the designation of identical parts.

To enable others skilled in the art to make and use my invention I will proceed to describe it.

w is a suction-pipe, and *v* the valve thereto. *u* is a cylinder, and *s* the plunger thereof. *t t* are valve-openings in the plunger *s*, and *r r* the valves thereto. *n* and *o* represent the ordinary stuffing-box, and *m* the piston rod. *k* is the connecting rod connecting the piston-rod *m* with the crank-arm *j* of the shaft *x*. The water-dome is carried from a common chamber, by two branches, *f f*, around the mechanism, again uniting in a common neck at its upper end, in which is seated the revolving conduit-pipe *a*. Upon the lower end of this pipe is the beveled gear-wheel *h*, through the aid of which the pipe *a* is made to revolve. Water is admitted into this pipe from the branch pipes *f f*, through the perforations *E* made in its lower end. Letters *g* and *d* represent rubber or other suitable packing around the pipe *a*. A thread is cut upon the outer end of the pipe *a*, upon which is screwed the pipe *y*. This pipe has

upon its outer end a suitable form of brush or sponge, *z*. The outer end of this is converted into a sprinkler. When desired, the upper end of the pipe *y*, consisting of the brush and sprinkler, can be removed and the ordinary nozzle attached thereto. At such times the gear-wheel *h'* is slipped back out of gear with the gear-wheel *h*, the revolution of the pipe *a* is arrested, and the nozzle replacing the brush the sprinkler is readily converted into a hose. I designate the handle by which my device is operated. This handle is permanently attached to the shaft *x* at its inner end, and its revolution produces the revolution of the crank-arm *i*, which, through its operation by the aid of the connecting-rod *k*, produces a reciprocating motion of the plunger *s* in the cylinder *n*.

In using my device it is securely strapped to the person by any suitable means, a flexible pipe extending from the pipe *w* to the water.

The following is the mode of operation: The extension of the pipe *a* is screwed onto its place, and the brush thereof allowed to come in contact with the window to be washed. The machine is then put in motion, forcing the water through the sprinkler *z q* onto the window, the extended pipe *a y*, revolving, carrying with it the brush *z*, washing the window perfectly, with much less trouble than by any other device known.

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

In combination with a hand-pump constructed as described, the crank *i*, gearing *h h'*, and revolving pipe *a*, adapted to receive a nozzle or mop, and all arranged and operated substantially as and for the purpose set forth.

CHARLES H. SMITH.

Witnesses:

A. C. LULL,
E. W. HOLCOME.