

(No Model.)

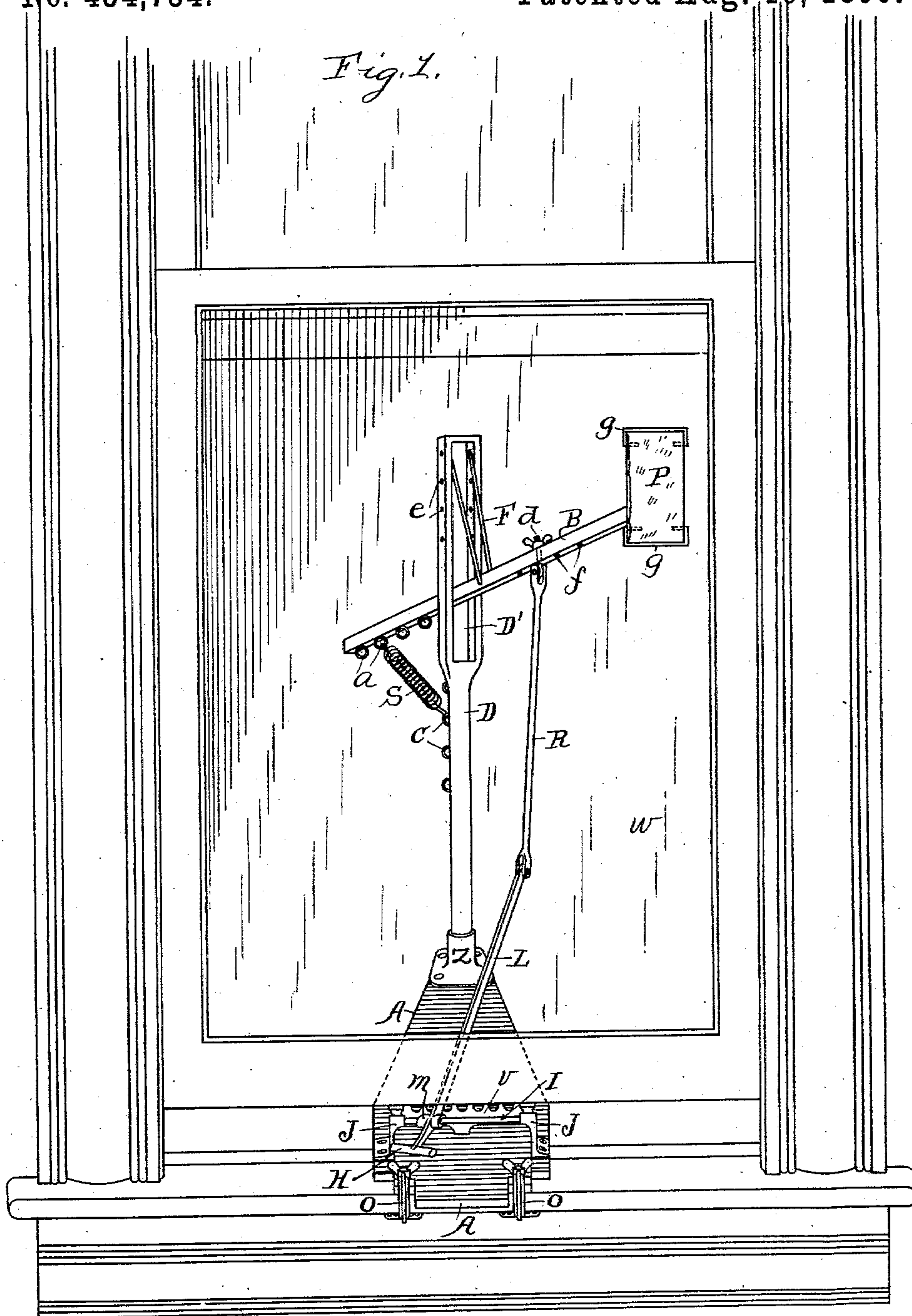
2 Sheets—Sheet 1.

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WINDOW WASHER.

No. 434,734.

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Fig. 1.



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UNITED STATES PATENT OFFICE.

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WINDOW-WASHER.

SPECIFICATION forming part of Letters Patent No. 434,734, dated August 19, 1890.

Application filed February 14, 1890. Serial No. 340,487. (No model.)

To all whom it may concern:

Be it known that I, ELLA A. STAUFFER, a citizen of the United States of America, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Window-Washers, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a perspective view of my invention, showing it secured to a window-sill, as it would appear when placed into position for use. Fig. 2 is a side elevation of the same. Fig. 3 is a detail side view of one end portion of the swinging arm thereof and a sectional view of a brush and its socket attached to said arm. Fig. 4 is a top plan view of the lever, its support, and shifting-rack thereof, showing the hub of the lever in section. Fig. 5 is a rear side elevation of said lever-support and shifting-rack. Fig. 6 is a back plan view of the window-rubber; and Fig. 7 is a detail view of portion of the swinging arm of the device, showing the swiveled eyebolt thereof, by means of which the said arm is connected to be operated by the lever mechanism.

This invention relates to certain improvements in a portable device for washing and cleaning the outer surface of window-panes, which is adapted to be clamped to a window-sill and operated from the inside of a building, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, A represents the base of a washer and is stepped at its front end and adapted to be secured to a window-sill by means of screw-clamps O O, as shown, the steps being for the purpose of adapting the base to window-sills of different widths.

Z is a socket-piece fixed to the outer end of the base. D is an upright supported by means of said socket-piece in such manner as to turn in the socket thereof, and formed as a part of the said upright at its upper portion is the yoke-frame D', which is provided with a series of cross-holes e, from which is suspended in said yoke-frame a swing F, consisting of a bent rod or wire terminating at its ends with opposite trunnions hung in the holes e.

B is an arm pivotally connected with and

suspended by means of the swing F in yoke D', and is provided at its forward end with a ball P², which is seated in the socket P' of the rubber P, and thus by means of said ball-and-socket joint connects with the said rubber or to a brush P'', as shown in Fig. 3. To the rear under side of said arm is secured a series of screw-eyes a, and to the rear part of upright D is a similar series of eyes e, and S is a coil-spring hooked at one end to an eye of the upright and at the opposite end to an eye of the arm, and is for the purpose of yieldingly holding the arm swung forward with the rubber against the window-pane w.

J and J are a pair of opposite standards, which are secured one at either side near the forward end of base A at a point directly below the window-sash, and are surmounted by a pair of post-brackets J' J', upon which the window-sash is lowered to rest; and V is a rack-bar arranged connecting said standards, and in the rear of the same a short distance and raised to a height about half-way from the standard's head to the base A.

I is a bar fixed at each end in the respective standards J J, spanning the space between them. L is a lever fulcrumed on said bar, and is provided with its hub-bearing m on said rod with a flared entrance at either side, as shown in Fig. 4, for the purpose of permitting the lever to tilt sidewise, as shown in Fig. 1, and the purpose of the rack-bar V is that the lever may be lowered in between a pair of its teeth and used as a bearing sidewise when the handle end H of the lever is pushed to one side to shift hub m along on bar I, which purchase is necessary, owing to the fact that when the lever is shifted it carries the inner end of arm B with it and also turns upright D to face in the direction the arm B is pointing, and by means of the length of bar I and such side shifting of the lever and arm the rubber P is brought at all points across a window-pane. d is an eyebolt swiveled in a hole of arm B with its eye depending from the arm, and is adapted to be shifted to other holes f (see Fig. 1) of the arm for certain adjustments, and R is a connecting bar or rod arranged connecting the outer end of lever L with said eyebolt for the purpose of imparting motion to the arm from lever L to work the rubber P or brush P'' up and

down the window-pane when the handle H is correspondingly worked, and for the further purpose of a medium for shifting the arm B with lever L when the shifting takes place, as described.

As a means of adapting the rubber and brush to be interchangeable, their socket P' is made in two parts, a part P³, hinged at *n* (see Fig. 6) to part P' and provided with a side slot *t'* and adapted to swing out to receive the ball P² and be held closed to retain the ball by means of the thumb-screw *t* in slot *t'*, and as a means of clamping a cloth or the like to the rubber P it is provided at either end with a clamping-bail *g*, these bails arranged to turn back to receive the cloth under them and be forced into position against the cloth at the ends of the rubber. The rubber P is made thin enough to enter between the top rail of the lower sash and the bottom rail of the top sash when the windows are in the position shown in Fig. 1, so that all the panes *w* may be washed.

When washing a window, the washer is set clamped to the sill, as shown and described, and as the lower pane is being washed by working the lever to cause the rubber or brush to rub up and down and be shifted sidewise to engage all parts of the glass water may be dashed between the upper and lower sash, when it will run down over the pane to the rubber, and when washing the upper pane it is lowered even with the lower sash, and then water may be dashed against its outer surface by reaching over the two sashes, and the washing is performed in like manner as is the lower pane. After the panes are washed dry cloths may be clamped to the rubber and the panes wiped dry in like manner as when washing them.

The series of eyes *a* and *c* are for the purpose of changing the position of spring S to accommodate different adjustments of the arm B, and the series of holes *e* and *f* are respectively for the purpose of changing the height of the swing F and arm B and for changing the position of the swiveled eyebolt *d* when longer or shorter strokes or more or less lever-purchase is required.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is as follows:

1. The herein-described washer, consisting of the combination, with the base A, of the socketed standard D, provided with the yoke D' and the series of eyes C, the swing F, hung in said yoke, the arm B, suspended by means of said swing and supporting on its forward end the rubber P or brush P' through the medium of the ball-and-socket joint, and provided at its rear end with the series of eyes *a*, the spring S, yieldingly connecting said arm to standard D, the standards J J', supporting the bar I and rack-bar V, the lever L, fulcrumed on and adapted to be shifted along bar I, and the connecting-rod R, connecting the lever with arm B through the medium of the swiveled eyebolt *d*, substantially as and for the purpose set forth.

2. In the herein-described window-washer, in combination with the yoke-standard and the lever mechanism, the swinging yielding arm B, carrying the rubber or brush, and the rod and swiveled connection for connecting and imparting motion to the said arm from the lever, substantially as and for the purpose specified.

3. In the herein-described window-washer, the combination, with the lever L, provided with the handle H and flared hub *m*, of the standards J J, the cross-rod I, and the shifting rack-bar V, substantially as and for the purpose set forth.

4. In the herein-described window-washer, the combination, with the base A, of the standards J J, surmounted by the post-brackets J' J' for supporting the window-sash, the cross-rod I, supporting the lever L, and the lever arranged fulcrumed on said cross-bar, wherein its handle H is adapted to be operated from the inside of a building, and thereby operate the window rubber or brush at the outside of the window-pane, substantially as set forth.

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