No. 844,700. PATENTED FEB. 19, 1907.

T. URBAN.

WINDOW CLEANER.

APPLICATION FILED AUG. 28, 1906.

Fig. 1.

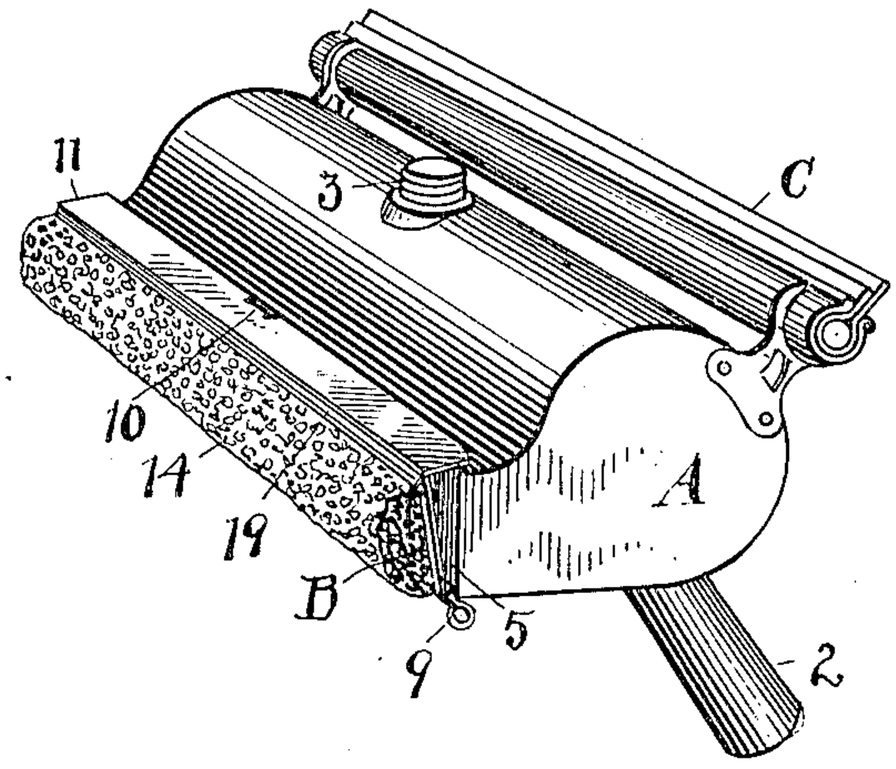


Fig. 3.

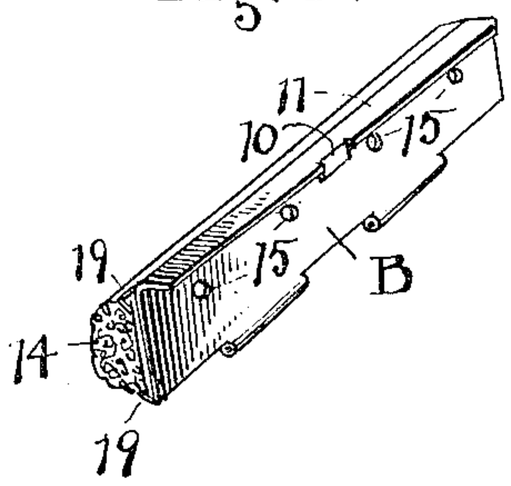


Fig. 2

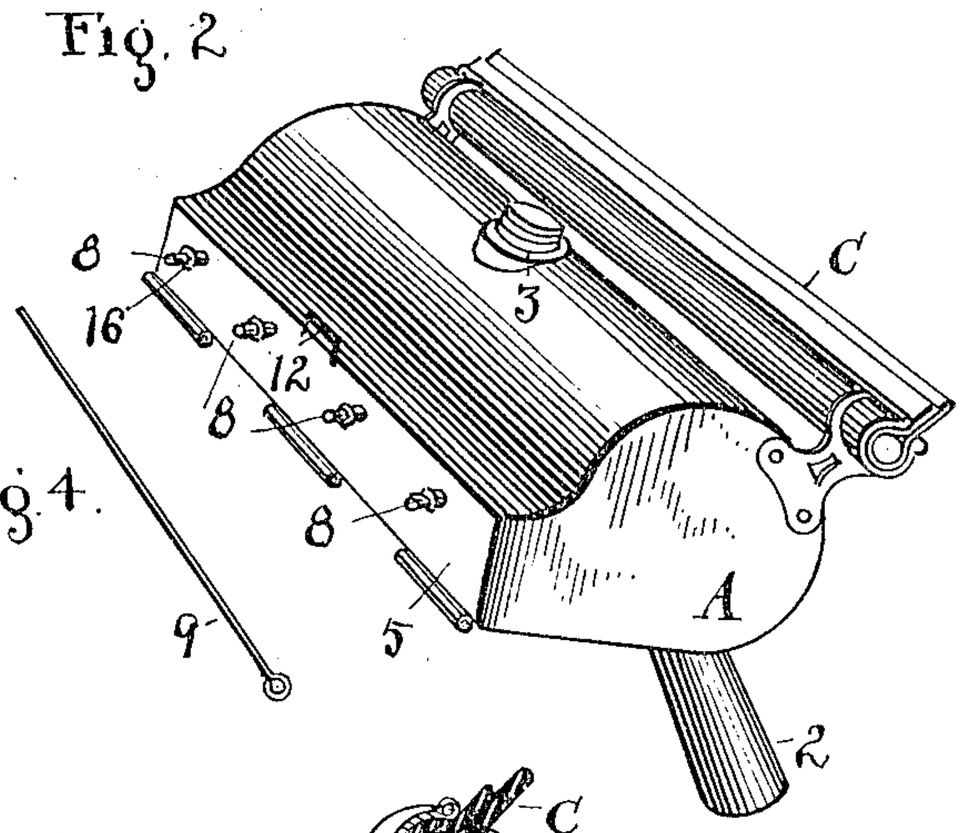
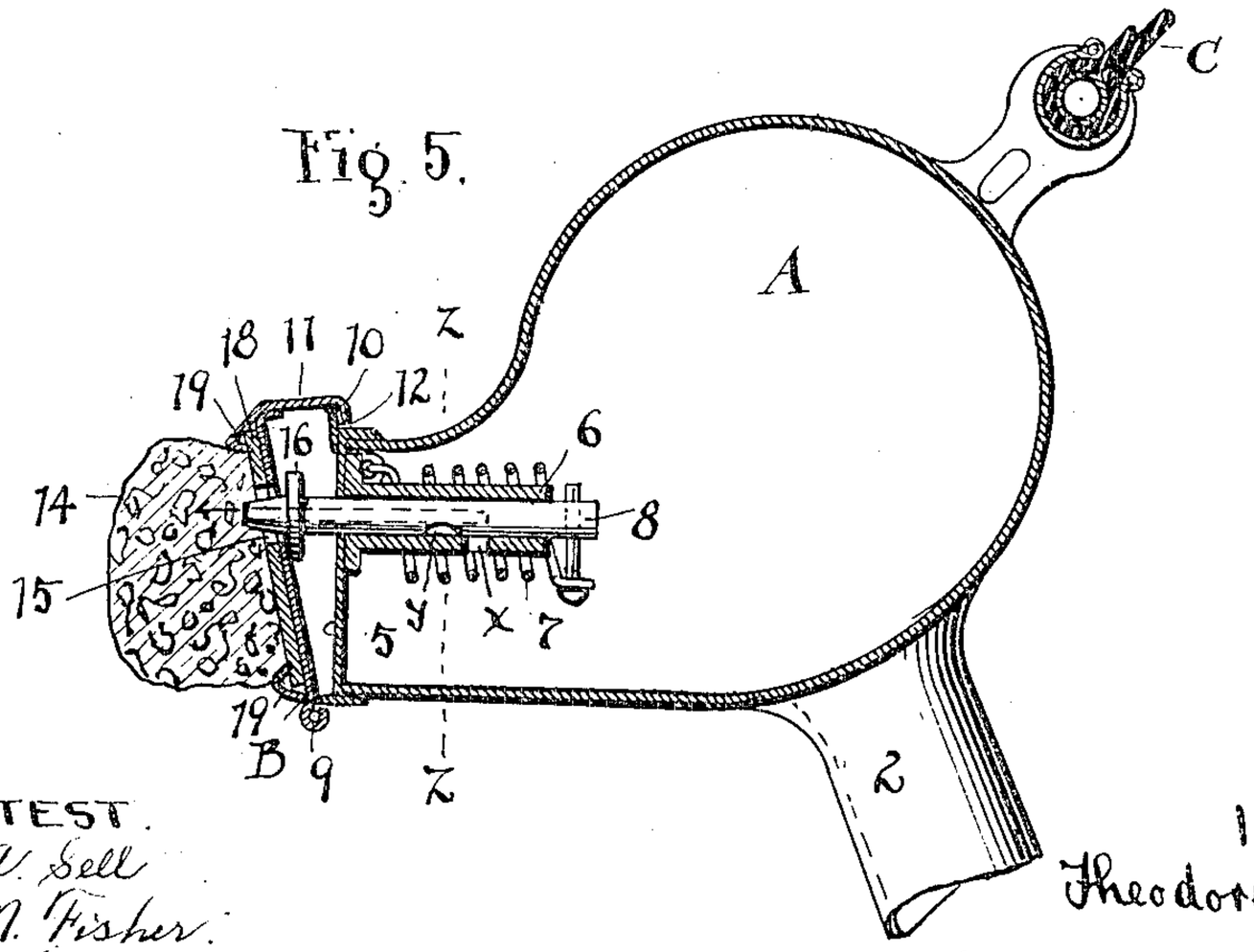


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

THEODORE URBAN, OF CLEVELAND, OHIO.

WINDOW-CLEANER.

No. 844,700. Specification of Letters Patent. Patented Feb. 19, 1907.

Application filed August 28, 1906. Serial No. 332,367.

To all whom it may concern:

Be it known that I, THEODORE URBAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Window-Cleaners; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in a window-cleaner comprising a fluid-receptacle and a cleansing member hinged thereto and provided with a rubber sponge or like material on its working face adapted to receive moisture from said receptacle when the intervening valved water-passages are opened, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective front elevation of the device. Fig. 2 is a perspective elevation of the body of the device without the hinged cleaning-wing, and Fig. 3 is a perspective view of the hinged wing alone. Fig. 4 is a detail of the pintle, and Fig. 5 is a cross-section of the device.

As thus shown, A represents the body of the receptacle, which is shown as having a length considerably in excess of its cross-section or in the proportion of, say, eight inches long by approximately three or three and a half inches wide front to rear. This receptacle or body is provided with a handle-socket 2, a capped or corked opening 3 for replenishing same, and a series of openings in its otherwise straight flat front plate 5, which stands at an inclination to the handle-socket relatively as shown and constitutes the front portion or face of the receptacle. The said openings emit water only when the valves connected therewith are open, and these open only when the device is doing work, as will now be seen. Thus each opening has a tube 6 of the peculiar construction shown seated at one end against the inside of the opening, and said tube carries a spiral spring 7, which has one end engaged with a slidable valve 8, mounted in said tube. The inner end of said valve-stem is so connected with spring 7 that normally the said stem is pressed outward and closed, and all said several outlet openings or holes in plate 5 are equipped with like valve mechanism. A recess X is cut in fixed tube 6 and another recess *y* in the tubular valve, and when the valve is pressed inward these recesses open to each other and water escapes to the outside through the passage in valve 8 from recess *y* outward.

B represents the hinged cleansing member or wing, which is hinged at its lower edge along the lower edge of front 5 of the receptacle by means of a long pintle or hinge-rod 9 passing through the hinge-loops of the respective parts and separably uniting the same. A catch 10 at the top of said wing in the rearwardly-extending flange 11 along its top edge engages with a projection 12 on body A, and thus holds said wing up in working position and with such back-and-forth play as is necessary to open and close the valve mechanism. Said wing is constructed on its face to carry an absorbent cleansing medium 14 of pad shape—such as sponge-rubber, ordinary sponge, or other material—and the said wing has holes 15 opposite the valve-tubes 8 to receive the water therefrom into the sponge. As this occurs the said valve-tubes are pressed back by the wing to open position. Small collars 16 encircle the valve-stems, which are engaged by the rear facing of wing B about the holes 15 therein, while the ends of the valve-tubes project into said holes more or less and deliver the water to the sponge. Normally and when there is no pressure against valve 8 springs 7 force them out, so as to close them completely as to the outlet opening or recess in the supporting-tube 6.

C represents a rubber or equivalent flexible wiper mounted on the top of the device in such relation to the handle that the device can be conveniently reversed in the hand to be used either for washing or wiping a window and usually one after the other.

It will be seen that wing B is removable and is kept in stock as an article of manufacture apart from the receptacle. This is because absorbent 14 wears away and has to be replaced at intervals, and I find it the better way to keep the entire wing in stock as such rather than provide attachable absorbent alone, for the reason that said absorbent must be firmly fastened from edge to edge and end to end of the wing to do good work, and in the case of sponge-rubber, which generally is used, it has to be cemented in place. I cannot advantageously cement to a plain metal plate, and hence fix the absorbent on a backing 18 of its own, for which rubber-cement has affinity, and on this backing I ce-

ment the sponge. This backing is engaged by or within flanges 19 along the edges of the wing, and when the sponge is worn out the wing is thrown away and another is provided from stock.

It will be noticed also that the receptacle has a peculiar construction at its front which adapts it especially to window-work. Thus the said front portion is reduced or narrowed in cross-section, as on line *z z*, Fig. 5, to make something of a narrow rectangular nose as defined at its front with square corners, so that when the wing and sponge are in place the operator can reach into the corners of windows and along their edges and thoroughly cleanse the same.

What I claim is—

1. A window-cleaning device having a receptacle with a flat front plate of greater length than width and openings at intervals in said plate, depressible valves mounted in said openings, and a wing hinged along one edge on said receptacle and means to limit the swing of said wing back and forth in respect to said receptacle, the said valves having ends projecting into contact with said wing.

2. The body of the device having a front face provided with a series of openings between its ends and spring-pressed valves extending from within said body through said openings having their outer ends exposed outside the openings, in combination with a wing hinged along one edge of said body and resting against the exposed ends of said valves, and the said wing having holes for said valves and constructed on its outer side to receive an absorbent pad, whereby the moisture issuing through said holes is taken up by said pad.

3. The receptacle having a front face provided with holes at intervals between its ends, valves seated endwise in said openings, tubular bearings for said valves and springs to close said valves encircling said bearings, in combination with a wing hinged along its lower edge and bearing against the exposed ends of said valves, and means to limit the swing of said wing back and forth at its top in respect to said face.

4. A suitable receptacle, a wing hinged at one edge thereon and an absorbent backing fixed upon the outer side of said wing, in combination with a series of slidable valves projecting through said receptacle into said wing, said wing being set at an inclination to the face of said receptacle.

5. In a window-cleaner, a fluid-receptacle having a series of holes along its front and a cleansing member yieldingly supported over said holes, in combination with a series of tubular fluid-carrying valves projecting through said receptacle into said holes and adapted to be opened by said cleansing member when under pressure, fixed tubular bearings for said valves in said receptacle and springs thereon connected with said valves.

6. In a window-cleaner, a fluid-receptacle having a cleansing member yieldingly supported lengthwise upon the front thereof, combined with means operatively controlled by said member to provide a uniform discharge of fluid the full length of said cleaner comprising a series of depressible tubular valves and supports for said valves fixed within said receptacle, said valves having outlet-openings adapted to register with openings within said receptacle.

In testimony whereof I sign this specification in the presence of two witnesses.

THEODORE URBAN.

Witnesses:

R. B. MOSER,

C. A. SELL.