Nov. 6, 1923. 1,473,395

A. M. BECKER

WINDOW CLEANER

Filed March 21, 1922

Fig:1.

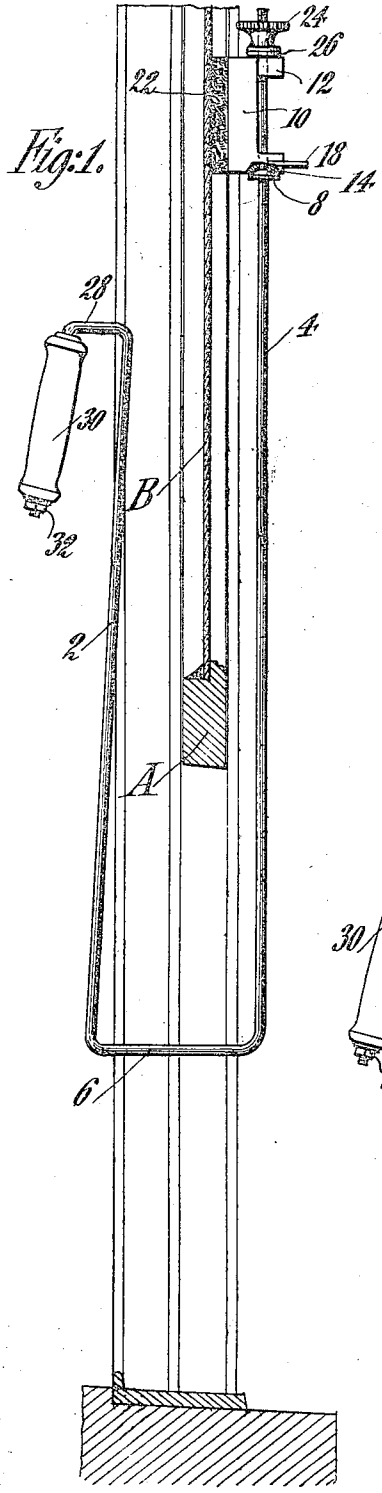


Fig:2.

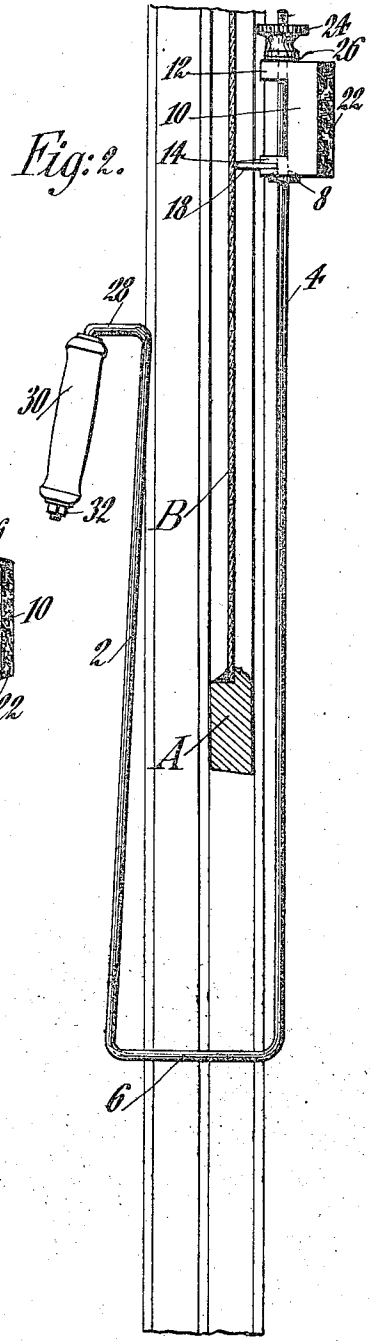
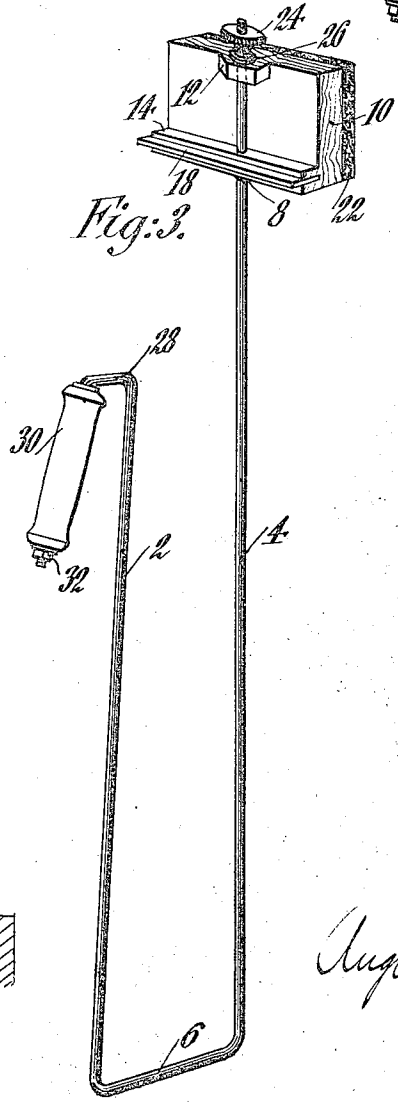


Fig:3.



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AUGUST M. BECKER, OF NEW YORK, N. Y.

WINDOW CLEANER.

Application filed March 21, 1922. Serial No. 545,613.

To all whom it may concern:

Be it known that I, AUGUST M. BECKER, a citizen of the United States, and resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Window Cleaners, of which the following is a specification.

This invention relates to window cleaners, and particularly to devices for cleaning windows of the type constructed to enable the outer surfaces of window panes to be cleaned from the inside of the window.

It has heretofore been proposed to provide devices for enabling the outer surfaces of the windows of a building to be cleaned from within the building, but, so far as the applicant is aware, such devices have not been well adapted for the purpose in view and, consequently, have not gone into general use. It is an object of this invention to provide a device whereby the outer surfaces of the windows may be very quickly and easily cleaned from within a building.

To this end an important feature of the invention resides in the provision of a U-shaped frame having a handle member connected with one of the leg portions of the frame, and window scrubbing and polishing means carried by the other leg portion substantially opposite from the handle member so that pressure can be applied to the outer surface of the pane of a window by a straight pull on the handle member toward the body of the user. Preferably, and in the illustrated construction, the frame of the device is formed from wire, and the window scrubbing and polishing means, respectively, are mounted on opposite sides of a block rotatably supported on the wire and adapted to be secured thereon, either with the scrubbing means or the polishing means on the side of the block toward the handle portion of the wire in position for operation on a window pane. The block is preferably supported on the wire at a level slightly above that of the handle member so as to enable the operation of the device to be readily observed.

Other objects and features of the invention will appear as the description proceeds, and will be pointed out in the appended claims.

In the drawings in which like reference numerals designate like parts in the various views:

Fig. 1 is a view of the device in side elevation with the scrubbing means in position for operation on the window pane;

Fig. 2 is a view similar to Fig. 1, but showing the polishing means in operative position; and

Fig. 3 is a perspective view of the device.

The illustrated device comprises a frame which, preferably, consists of a single length of wire bent into substantially U-shape so as to provide leg portions 2 and 4 joined by a bar portion 6. The leg portion 4 is preferably somewhat longer than the leg portion 2, and is provided adjacent to its upper end with a shoulder 8 upon which a block 10 is rotatably supported.

The block 10 may be made of wood or any suitable metal, and is provided at one of its sides 11 with a central projection 12 arranged adjacent to its top and a projection 14 adjacent to its bottom. The projection 14, as clearly appears from Figs. 1 and 3, is substantially rectangular in transverse section, and said projection also extends from end to end of the block 10. The projection 14 is grooved in its outer face, preferably along its entire length. Seated in the groove is a polishing strip 18 composed of rubber or other suitable material and substantially equal in length to the block 10. The projections 12 and 14 are provided with openings to receive the upper end of the wire above the shoulder 8, and the openings in the projections are so arranged that, when the device is assembled, the wire is disposed in substantial contact with the side 11 of the block 10 between the projections.

Secured adhesively to the surface of the block 10 opposite from the surface 11 is a layer 22 of felt or the like substantially equal in length and height to the block 10, so as to cover the entire surface of the block on that side.

A thumb nut 24 is threadably engaged on the upper end of the wire above the projection 12 on the block 10, and a washer 26 is prefereably interposed between the projection 12 and the thumb nut 24. With this construction the block 10 may be secured in any desired position on the wire by turning

down the thumb nut 24. When it is desired to change the position of the block 10 on the wire, the thumb nut 24 is turned upwardly thereon to loosen the block, which may then be turned to any desired position and secured in such position by turning down the thumb nut 24 to clamp the block against the shoulder 8.

At the upper end of the leg portion 2 the wire is bent laterally, as indicated at 28, and then downwardly, and a handle member 30 is mounted on the downwardly turned outer end of the wire in substantially parallel relation to the leg 2. As shown, the downwardly turned outer end of the wire is threaded, and the handle member 30 is secured thereon by a nut 32.

In the use of the device, the layer of felt 22 is moistened and a soap powder or other cleansing agent is applied to its outer surface, the block 10 being secured upon the leg portion 4 of the wire with the layer of felt 22 disposed on the side of the block toward the handle member 30. The device is then manipulated into a position, such as is shown in Fig. 1, with the block 10 and the leg portion 4 of the wire located on the outer side of the window sash A and pane B. The leg portion 2 and handle member 30 of the wire are located on the inside of the window, and, as shown in Fig. 1, the bar 6 of the wire passes beneath the window frame A. The leg portion 4 of the wire is of a length greater than one half of the height of the windows to be cleaned, it being contemplated that in the manufacture of the improved window cleaner of this invention, the length of the leg portion 4 will be about three quarters of the usual height of the windows of dwelling houses and apartments for domestic use, and in the same proportion to the usual height of the windows of office buildings for office use. After the outer surface of the bottom portion of the window pane B has been scrubbed, as indicated in Fig. 1, the device is inverted so that the bar 6 of the U-shaped frame extends across the top of the window frame A for scrubbing the outer surface of the top portion of the pane. The device is then withdrawn into the room and the block 10 turned on the wire through an angle of 180°, thereby bringing the polishing strip 18 on the side of the block 10 toward the handle member 30 in position for operation on the window pane B. The window pane may then be polished by manipulation of the device in the manner already described.

In the event that the layer of felt 22 is used in a very wet condition for scrubbing the outer surface of a window pane, as may be desirable in the washing of a very dirty window, the block 10 may be turned on the wire following the scrubbing operation to present the polishing strip 18 in operative position, and the polishing strip may then be used to remove the major portion of the water from the surface of the pane. The device may then be withdrawn again into the room and a dry cloth wound about the block 10 over the outer face of the layer of felt 22. The dry cloth may be employed to completely dry the surface of the window, after which the block 10 may be again turned to restore the polishing strip 18 to operative position to enable it to be used to polish the window.

Preferably, and as shown, the handle member 30 is disposed substantially opposite from the block 10 upon which the scrubbing and polishing means are mounted, the handle member 30 being only sufficiently below the level of the block 10 to enable the movements of the block over the outer surface of the window pane being cleaned to be readily observed by the user of my improved device. In the use of devices of this kind, particularly in scrubbing a window, it is often necessary or desirable to exert considerable pressure upon the window surface in order to remove therefrom matter which adheres strongly thereto. With the construction above described, it is apparent that the necessary pressure upon the window pane may be obtained by a straight pull on the handle member 30 toward the body of the user, so that a considerable pressure may be obtained whenever necessary on a window with very little effort on the part of a person using the device. This is a very important feature of the invention, it being apparent that if the block 10 were mounted upon a straight handle or if the handle member of the device were located opposite from the bottom of the rod on which the block 10 were mounted, the leverage in the use of the device on the outer surface of a window pane would be such as to prevent the pressure from being properly and efficiently translated to the window pane.

From the foregoing description, the construction, manner of use, and several advantages of the invention will be manifest.

Having fully described the invention, what is claimed is:

1. A window cleaner comprising a U-shaped wire frame, one of the leg portions of which is constructed to provide a shoulder adjacent to its upper end, a handle member extending downwardly from the other leg portion of the frame and substantially parallel thereto, a block rotatably mounted on the first-mentioned leg portion and supported by said shoulder, a layer of felt at one side of the block, a rubber strip seated in the side of the block opposite from the layer of felt, and means for securing the block to the frame with either the felt or the rubber strip disposed on the side of the

block toward the handle member in position for operation on a window.

2. A window cleaner comprising a U-shaped wire, one of the leg portions of which is provided with a shoulder adjacent to its upper end, a block rotatably mounted on the shoulder and having one of its sides in substantial contact with the wire above the shoulder, projections extending from said side of the block adjacent to its top and bottom and provided with openings to receive the wire, a polishing strip mounted in the projection adjacent to the bottom of the block, a layer of felt secured to the side of the block opposite from said projections, a handle member carried by the other leg portion of the wire, and a thumb screw threaded on the top of the first-mentioned leg portion for selectively securing the block on the wire with either the layer of felt or the polishing strip disposed on the side of the block toward the handle member in position for operation on a window.

3. A window cleaner, comprising a U-shaped frame having legs of unequal length, the shorter leg forming a handle member, the longer leg being provided with a fixed shoulder and an adjustable shoulder, and a block rotatably mounted upon the upper end of the longer member between said shoulders and provided on one side with window scrubbing means and on the opposite side with polishing means.

4. A window cleaner, comprising a U-shaped frame having legs of unequal length, the shorter leg thereof forming a handle member, the longer leg being provided on its upper end with upper and lower shoulder members, a block having one side in close proximity to said leg and provided with offset members rotatably mounted thereon, one side of said block being provided with scrubbing means and the other side provided with polishing means.

In testimony that I claim the foregoing as my invention, I have signed my name.

AUGUST M. BECKER.