June 13, 1950 N. KENNEDY 2,511,346

WINDOW CLEANING DEVICE

Filed June 10, 1946

Fig. 2

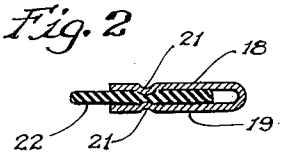


Fig. 1

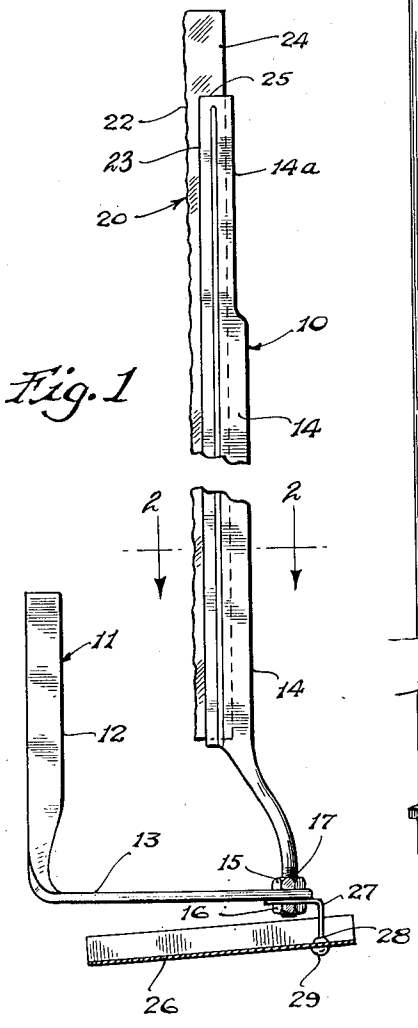
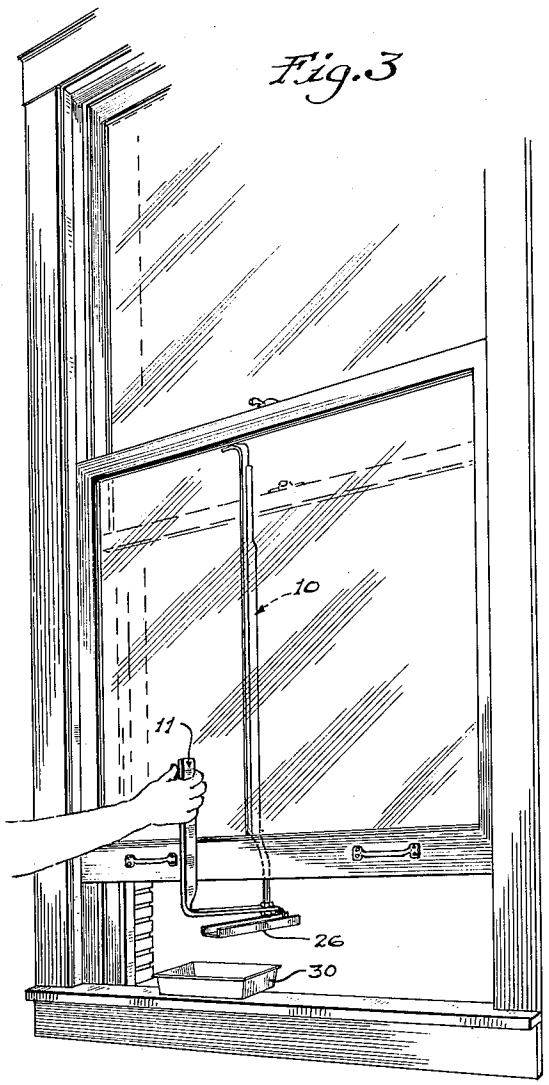


Fig. 3



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WINDOW CLEANING DEVICE

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6 Claims. (Cl. 15—245)

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This invention relates to window cleaning devices and more particularly to that type of window cleaning device by which the operator while remaining inside can clean and dry the outside of a window.

A common disadvantage of window cleaning devices heretofore known to the art was that the water or moisture removed by these devices ran down the window and wet or soiled the window sill below. It is an object of my invention to associate in combination with the cleaning element of a cleaning device a drain by which moisture removed from the window and which runs down the blade of the device can be drained off in such a manner that it does not wet or soil the window sill, as, for example, by draining it into a container.

Another object of my invention is to provide a window cleaning device which can be economically manufactured and whereby an entire window pane can be cleaned or dried in one motion of the device.

It is a further object of my invention to so construct a window cleaning device that it can be used on windows of various lengths to clean the windows in one lateral motion without the necessity of the device being specially adjusted for the various size windows.

Other and further objects of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawing which, by way of illustration, shows a preferred embodiment and the principles thereof and what I now consider to be the best mode in which I have contemplated applying those principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

In the drawings:

Fig. 1 is a side elevational view of my device showing the drain therefor in section;

Fig. 2 is a sectional view taken substantially along the line 2—2 of Fig. 1; and

Fig. 3 is a perspective view showing my device as it may be used to clean the lower pane of a window.

The window cleaning device 10 shown in the accompanying drawings embodies a substantially L-shaped handle 11 having a vertical arm or hand grip 12 and a horizontal arm 13 substantially perpendicular thereto. A supporting arm

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or shaft 14 is attached to the free end of the arm 13 of the handle 11 by any suitable means such as nuts 15 and 16 screwed on to the end of a threaded portion 17 of the supporting shaft 14. As best shown in Fig. 2, a portion of the supporting shaft or arm 14 is channel shaped having sides 18 and 19 and has a reduced portion 14a which, as will be explained more fully hereinafter, can be operated between the window pane of a lower window and the lower rail of an upper window sash. A flexible cleaning blade or squeegee 20, which may be made of any suitable material such as, for example, rubber or synthetic rubber, is attached to the arm 14 by insertion of one edge portion thereof between the sides 18 and 19 which are crimped as at 21 to firmly hold the cleaning blade 20 in such a position that a portion 22 thereof extends outwardly from one edge 23 of the supporting arm 14. The cleaning blade or squeegee 20 has a flexible end portion 24 protruding or extending from the end 25 of the supporting arm 14. The purpose of the protruding end 24 of the flexible cleaning blade 20, as will be explained more fully hereinafter, is to provide a cleaning device that will automatically adjust itself for the cleaning of windows of sizes which vary within certain limits.

A drain 26 is attached to the lower end of the shaft 14 by suitable means such as a wire 27 having a looped end encircling the lower end of the shaft 14 and held securely in engagement with the lower surface of the arm 13 by the nut 16, and having the lower end extending through the drain 26 and securely attached thereto by suitable means such as soldering or welding, or (as shown in Fig. 1) by upset portions 28 and 29 of the wire 27 itself.

The peripheral edges of the drain 26 extend outwardly sufficiently beyond the outline of the horizontal arm 13 and the supporting arm 14 so that in the operation of my device any water or moisture which runs down the blade 20 and supporting arm 14 will run into the drain 26. The drain 26 may be of any suitable shape such as, for example, a U-shaped drain as illustrated in Fig. 3 and should be tilted in a longitudinal direction so that moisture entering said drain will exit through one end thereof such as, for example, tilted forwardly down as shown in Fig. 1 so that the moisture will exit through the front portion thereof.

In the operation of my device the lower window may be raised slightly and the outer surface of the window pane thereof moistened by any suitable means. The supporting member

14 is then slipped outwardly through the window and is extended vertically along the window pane with the protruding end 24 of the squeegee 20 and reduced portion 14a of the supporting member 14 extending between the window pane of the lower window and the lower rail of the top sash substantially as shown in Fig. 3. It is obvious that by grasping the arm 12 of the handle 11 to control the movement of my device that the squeegee 20 may be pressed tightly against the window pane and manipulated laterally thereover to remove the moisture therefrom, and that by starting from one edge of the window pane this may be accomplished in one lateral motion of the device. Moisture running down the blade 20 and supporting arm 14 will flow into the drain 26 and can be controllably emptied therefrom such as into a container 30 shown in Fig. 3 as resting on the sill of the window and which can be moved along with the device. However, it will be noted that the container 30 is not an element of my invention and other types of containers may be used without departing from my invention, and that it is also possible, where water may be drained out the window without creating a nuisance, that by tilting the drain 26 rearwardly down instead of forwardly down as shown in the accompanying drawings water may be drained out the window and permitted to fall freely therefrom and the use of a container, such as the container 30, may be dispensed with.

It will be noted that it is not necessary, in order to efficiently clean a window pane with one lateral motion of my device, that the window pane be exactly the same length as the overall length of the cleaning blade. It is sufficient that the window pane be of a size within certain limits, namely, that it not be longer than the overall length of the cleaning blade 14 nor shorter than the length to which the blade 14 will adjust itself by the bending of the flexible protruding section 24. An example of this is illustrated in Fig. 3 where I have shown the length of the window pane to be somewhat shorter than the overall length of the squeegee 20, and it will be noted that the end of the protruding end portion 24 is contacted by the lower edge of the upper rail of the lower sash and the end portion 24 is offset thereby while still retaining good wiping contact with the window pane. Because of the protruding end portion 24, it will be seen that my device will efficiently clean in one motion window panes of the same length as, or considerably shorter than, the squeegee 20.

In the cleaning of the outside of an upper window the upper window pane is first drawn down substantially in alignment with the lower window pane and the outer surface of the upper window pane is then moistened by any suitable means and the window cleaning device 10 is extended out through the window and so positioned that the arm 14 and the handle 11 straddle both the upper and lower window panes and it can then be manipulated as previously set forth with respect to the cleaning of the lower window pane.

Hence, while I have illustrated and described the preferred embodiment of my invention, it is to be understood that this is capable of variation and modification and I, therefore, do not wish to be limited to the precise details set forth, but desire to avail myself of such changes and alterations as fall within the purview of the following claims.

I claim:

1. A window cleaning device comprising a supporting shaft, a cleaning blade attached to said shaft, a handle attached to the lower portion of said shaft, and a drain attached to the lower end of said shaft and positioned to receive drainage from said shaft.

2. A window cleaning device comprising a supporting arm, cleaning means secured along one edge of said arm, a substantially L-shaped handle attached to the lower portion of said arm, and a drain attached to the lower end of said arm and having lateral edges which extend laterally outwardly beyond said handle, said drain being adapted to receive drainage from said arm and said handle.

3. A window cleaning device comprising a supporting arm, a cleaning blade having one edge portion rigidly attached to said supporting arm and another edge portion flexibly extending from a lateral edge of said arm, said cleaning blade also having a bendable flexible end portion extending from the end of said arm, and a handle attached to said arm.

4. A window cleaning device comprising a supporting arm, a cleaning blade having one edge portion rigidly attached to said supporting arm and another edge portion flexibly extending from a lateral edge of said arm, said cleaning blade also having a bendable flexible end portion extending from the end of said arm, a handle attached to said arm, and a drain supported by and positioned below said arm to receive drainage from said cleaning blade and said arm.

5. A window cleaning device comprising the combination of a supporting arm having a substantially channel shaped longitudinal portion, a handle having a hand grip and an arm substantially perpendicular to said hand grip, said handle being attached to the lower end of said supporting arm at one end of said arm so that said hand grip is spaced from and substantially parallel to said supporting arm, a cleaning blade attached to said supporting arm and having one edge portion positioned within said channel shaped portion and another edge portion flexibly extending beyond a longitudinal edge of said channel shaped portion of said supporting arm, said cleaning blade also having an end portion flexibly protruding from an end of said channel shaped portion of said supporting arm, and a substantially U-shaped elongated drain attached to said supporting arm and positioned below said supporting arm and said arm of said handle, the lateral edges of said drain extending beyond the lateral edges of said arm of said handle and said drain being tilted downwardly in a longitudinal direction.

6. A window cleaning device comprising a supporting arm having a channel-shaped portion, an elongated one-piece cleaning blade having one longitudinal edge portion fixedly secured in said channel-shaped portion, said blade being resilient and having another longitudinal edge portion flexibly projecting from a longitudinal edge of said channel shaped portion of said arm, said cleaning blade having one end projecting from one end of said arm, the whole of said end of said blade being bendable and flexible relative to said arm, and a handle attached to said arm for moving said blade across a window to be cleaned.

NELLIE KENNEDY.

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