March 29, 1949. C. CARLSTROEM 2,465,514

WINDOW CLEANING DEVICE

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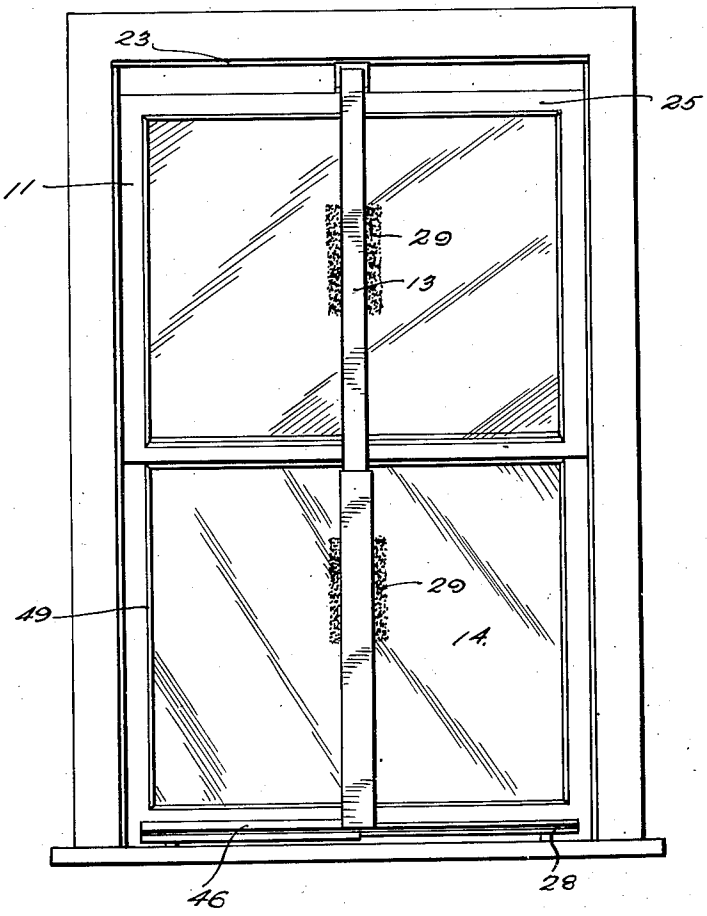
Fig. 1.



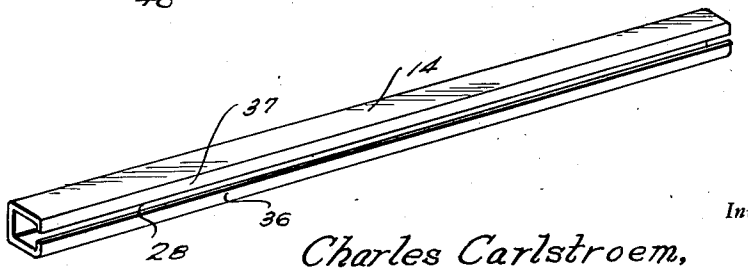




Fig. 2.

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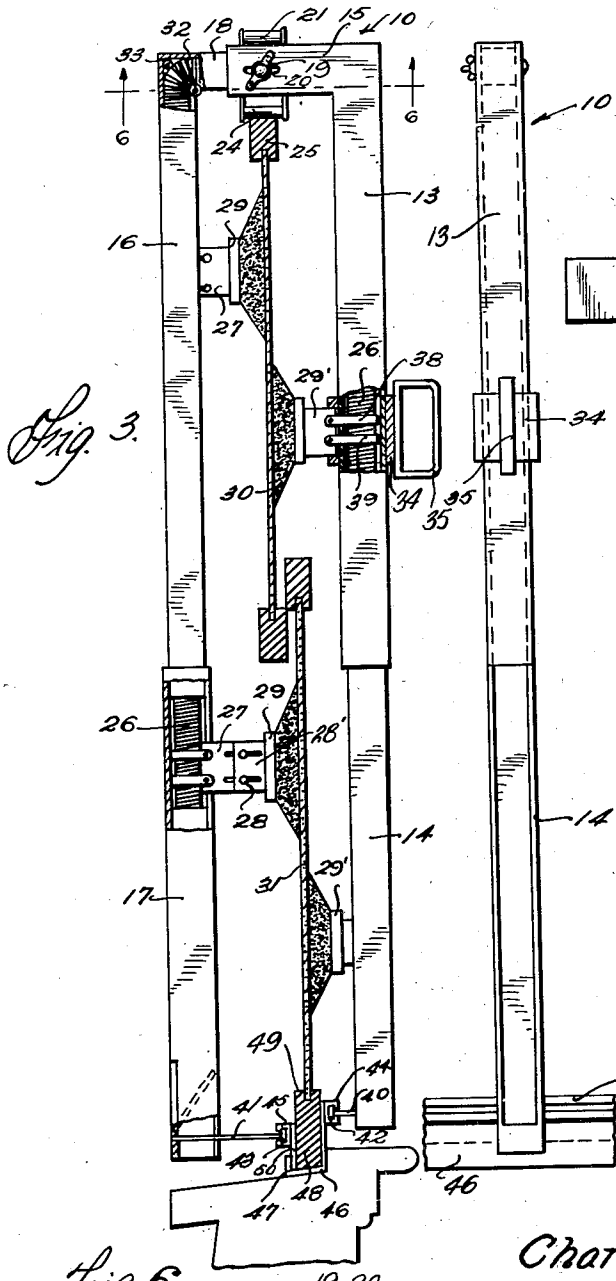


Fig. 3.

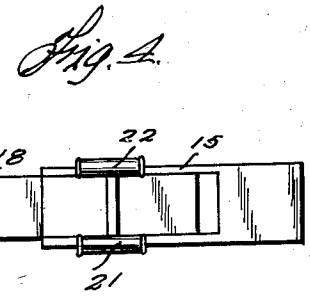


Fig. 4.

Fig. 5.

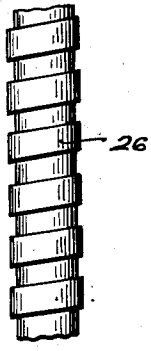


Fig. 7.

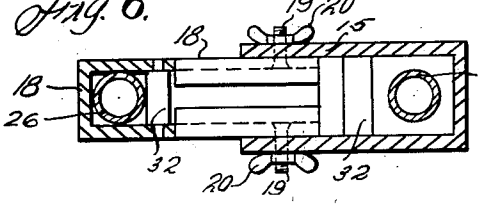


Fig. 6.

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Patented Mar. 29, 1949 2,465,514

# UNITED STATES PATENT OFFICE

2,465,514

## WINDOW CLEANING DEVICE

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Application November 8, 1944, Serial No. 562,468

7 Claims. (Cl. 15—252)

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This invention relates to a device for cleaning a window inside and outside at one and the same time.

Another object of the invention is to provide a pair of telescopic channel members having means for adjustably connecting the same.

A further object of the invention is to provide an inverted U-shaped split tube in which flexible vertically moving members carry a series of brushes or mops for cleaning windows on both sides at one and the same time.

A still further object of the invention is to provide means for carrying vertically movable brushes adapted to contact both sides of a window glass together with means for horizontal movement of the carrying means.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings in which:

Figure 1 is an elevational view of my device shown in position upon a window,

Figure 2 is a detail perspective view of a channel member,

Figure 3 is an enlarged vertical sectional view of a window showing my device attached thereto,

Figure 4 is a front elevation of the device,

Figure 5 is a top plan view of my device,

Figure 6 is a section on line 6—6 of Figure 3, and

Figure 7 is a detail view of a flexible tubing.

The same elements of my invention are indicated by the same reference characters in both the drawings and in the following specification and in which 10, represents my window cleaner as an entirety, the details of construction being as follows: On the inside of the window 11, is a pair of telescopically connected channel members 13 and 14, the upper member 13, of which is provided with a right angular extension 15, and outside of the window is located a similar pair of telescopically connected channel members 16 and 17, the upper one 16, of which is provided with a right angular extension 18, telescopically seated within the extension 15, and connected thereto at each side by means of a bolt 19, operating through a slot 20, in the member 15, a wing nut being provided on the bolt whereby the said members 18 and 15, may be secured in adjustable position. Mounted on the top of the member 15, are rollers 21 and 22, adapted to bear against the window frame member 23, and under the said member 15, are a pair of similarly disposed rollers 24, adapted to seat upon the window stile 25.

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Operating within the inner and outer channel members 13 and 14, 16 and 17, and through the right angular extensions 15 and 18, is a flexible tube 26, having fixed thereto at suitably spaced intervals plates 27, projecting through the longitudinal slots 28, of said channel members and adjustably attached to the plates 27, are similar plates 28', secured to the brushes 29, said brushes bearing upon the inside and outside surfaces of the window glass 30 and 31. The member 26, when passing through the horizontal portions 15 and 18, of the channel members, operates upon and beneath rollers 32 and 33, respectively.

Slidably operating upon the inner channel member 13, is a collar 34, to which is attached a handle 35. Said collar encircles the member 13, and is provided with inturned tongues on its inner side which operate within the longitudinal slots 28, and engage the flanges 36 and 37, of the member 13, which collar is also provided with band extensions 38 and 39 which are secured to the said member 26, whereby when the handle 25, is moved up and down upon the member 13, the flexible member 26, is likewise moved up and down, carrying with it the inner brushes 29' and the outer brushes 29.

The lower ends of the members 14 and 17, are connected by bars 40 and 41, having rollers 42 and 43 on their outer ends, to the longitudinal tracks 44 and 45, whereby the said members 14 and 17 are held in rigid vertical position and also whereby the device may be operated horizontally back and forth throughout the width of the said window 11. Connected to the trackway 44, is an L-shaped channel member 46, having an up turned outer arm 47. This channel member is adapted to receive the lower stile 48 of the lower sash 49, of said window 11, whereby the said member 46, will be held seated longitudinally under said sash and whereby the flange 50, projecting downwardly from the member 45, will be held secured against the said outer surface of said stile 48. The member 46, is also formed of a pair of telescopically connected members whereby the same may be adjusted to windows of varying widths.

As it may be occasionally required to use my device with a single sash window the sections 14 and 17, of the said telescopic members may be removed and the upper sections 13 and 16, only be used. In this case the tubing 26, will hang free below the members 13 and 16, and through its flexibility will move out of vertical alignment with said members 13 and 16, to permit the upper brushes 29 and 29', to move freely from top to bottom of the glass 30.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in shape, size and rearrangement of details and parts such as come within the purview of the invention claimed may be resorted to, in actual practice, if desired.

Having described my invention, that which I claim to be new and desire to procure by Letters Patent is:

1. A window cleaning device including spaced parallel vertical channel members, including facing longitudinal openings and comprising telescopically connected channel members to vary the length thereof, angular extensions at the upper ends of said channel members telescopically connected and having means to movably support the same on a top stile of a window sash for horizontal movement across the pane thereof, a flexible tube movable endwise in said channel members, window cleaning members operatively connected to said tube and movable therewith in the opening of the channel members, and means on the channel members and connected to the tube through the opening thereof to move said tube.

2. A window cleaning device including spaced parallel vertical channel members, including facing longitudinal openings and comprising telescopically connected channel members to vary the length thereof, angular extensions at the upper ends of said channel members telescopically connected and having means to movably support the same on a top stile of a window sash for horizontal movement across the pane thereof, a flexible tube movable endwise in said channel members, window cleaning members operatively connected to said tube and movable therewith in the opening of the channel members, means on the channel members and connected to the tube through the opening thereof to move said tube, and means to movably support the channel members at the top of a window sash for movement horizontally across the window pane thereof.

3. A window cleaning device including spaced parallel vertical channel members, including facing longitudinal openings and comprising telescopically connected channel members to vary the length thereof, angular extensions at the upper ends of said channel members telescopically connected and having means to movably support the same on a top stile of a window sash for horizontal movement across the pane thereof, a flexible tube movable endwise in said channel members, window cleaning members operatively connected to said tube and movable therewith in the opening of the channel members, means on the channel members and connected to the tube through the opening thereof to move said tube, and means to movably support the channel members at the bottom of a window sash for movement horizontally across the window pane thereof.

4. A window cleaning device including spaced parallel vertical channel members, including facing longitudinal openings and comprising telescopically connected channel members to vary the length thereof, angular extensions at the upper ends of said channel members telescopically connected and having means to movably support the same on a top stile of a window sash for horizontal movement across the pane thereof, a flexible tube movable endwise in said channel members, window cleaning members operatively connected to said tube and movable therewith in the opening of the channel members, means on the channel members and connected to the tube through the opening thereof to move said tube, and means to movably support the channel members at the top and bottom of a window sash for movement horizontally across the window pane thereof.



5. A window cleaning device including spaced parallel vertical channel members, having their longitudinal openings facing in opposite directions toward each other, angular extensions at the upper ends of said channel members telescopically connected and having means to movably support the same upon the top stile of a window sash for horizontal movement across the pane thereof, a flexible tube in said channel members and extending throughout the length thereof and across said connection between the channel members, brushes carried by said tube and movable vertically in the slots of the channel members to engage the pane upon opposite sides thereof, and means connected to the tube of one channel member and movably mounted on the same to move the tube and shift the brushes vertically.

6. A window cleaning device including spaced parallel vertical channel members, having their longitudinal openings facing in opposite directions toward each other and each comprising telescopically connected channel members to vary the length thereof, angular extensions at the upper ends of said channel members telescopically connected and having means to movably support the same upon the top stile of a window sash for horizontal movement across the pane thereof, a flexible tube in said channel members and extending throughout the length thereof and across said connection between the channel members, brushes carried by said tube and movable vertically in the slots of the channel members to engage the pane upon opposite sides thereof, means connected to the tube of one channel member and movably mounted on the same to move the tube and shift the brushes vertically, and means connected to the lower ends of said channel members and cooperating with means arranged beneath the bottom of the sash to hold said channel members in fixed relation to the pane at the bottom and adapted to guide the same horizontally across the pane.

7. The combination of claim 5 wherein means are secured to said channel members for laterally adjusting said brushes from said window.

CHARLES CARLSTROEM.

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