April 14, 1936. P. J. ROTH 2,037,438

WINDOW CLEANING SEAT

Filed May 25, 1934

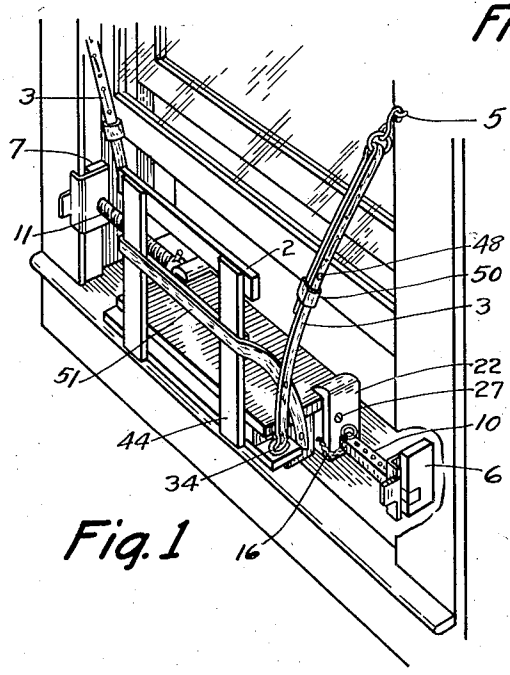


Fig. 1

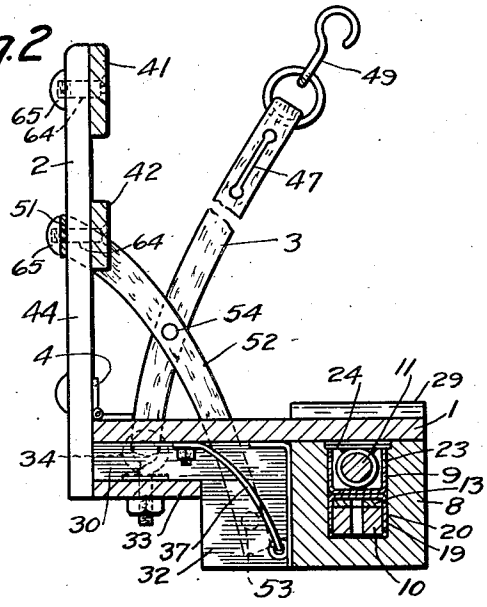


Fig. 2

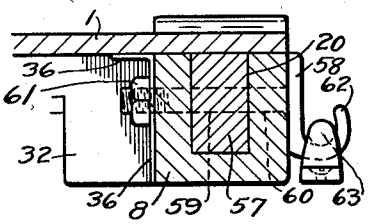


Fig. 5

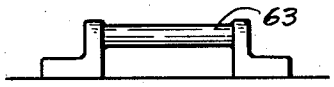


Fig. 6

Fig. 3

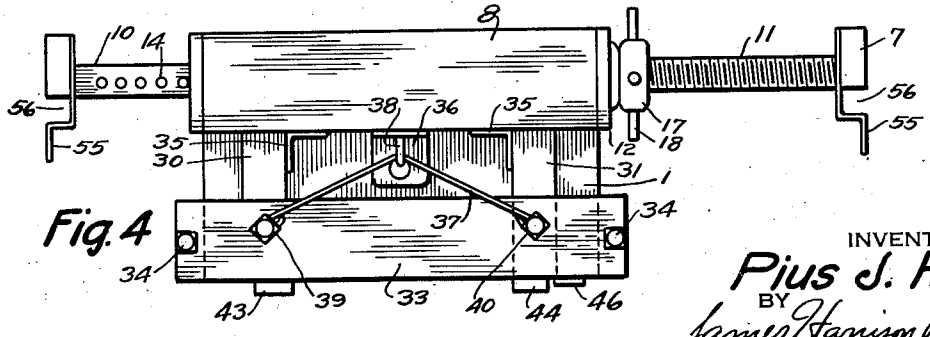


Fig. 4

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WINDOW CLEANING SEAT

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3 Claims. (Cl. 304—24)

The purpose of this invention is to remove the hazard of window cleaning by providing an absolutely safe seat that may be positioned on the outside of a window before the cleaner goes thru the window, so that it is not necessary to climb thru a window, holding onto the sash while the ends of the straps are hooked over holding devices on the outside.

The invention is a seat having a hinged back with straps adapted to support the seat from studs on a window frame and also having means holding the edge of the seat to the frame. Window cleaning devices of different designs have been provided, however, most of these are in the form of straps or other devices that are hooked over studs on the outside of a window frame, and it is impossible to hook the ends of the straps over the studs from the inside of the window, so that it is necessary for the cleaner to climb thru the window, holding onto the sash until he is on the outside, and while he is holding himself in this position with one hand, he must hook the ends of the straps over the studs with the other, thereby depending upon his grip on the window sash and also upon the strength of the sash.

The object of the invention is, therefore, to provide means for holding window cleaners which may be mounted on the outside of the window from the inside.

Another object is to provide a device for holding window cleaners which is provided with double holding means.

Another object is to provide a device for holding window cleaners in which a seat may be clamped between the outer edges of the window frame.

A further object is to provide means for holding window cleaners which is positively held in which means is provided for adjusting the holding means to windows of different widths.

And a still further object is to provide a seat for holding window cleaners which is comparatively simple and inexpensive.

With these ends in view the invention embodies a seat having straps by which it may be suspended from lugs on a window frame, and clamping means by which it may be clamped or held to the window frame.

Other features and advantages of the invention will appear from the following description taken in connection with the drawing, wherein:

Figure 1 is a view showing the seat as it would appear ready for use.

Figure 2 is a view showing a cross section thru the seat.

Figure 3 is a front view of the seat.

Figure 4 is a view looking toward the under side of the seat.

Figure 5 is a view looking toward one end of the seat with parts removed, showing a clip by which the front of the seat may be held to a bar on the window sill.

Figure 6 is a detail showing the bar to which the seat may be attached.

In the drawing the device is shown as it may be made wherein numeral 1 indicates the seat, numeral 2 a back, and numeral 3 straps by which the seat may be supported.

The seat is preferably made of wood with metal parts, however, it will be understood that it may be made of any material, and a seat of any type or design may be used. In the design shown the seat 1 is formed of a comparatively flat board, and the back 2 is hinged to the rear edge thereof by hinges 4. The straps 3 may be attached to the ends of the seat and with the seat placed out of a window, and with the upper ends of the straps hooked in eyes 5 on the window frame, the seat may be supported by the straps on the outside of the window. With the seat in position, blocks 6 and 7 extending outward from the ends of the seat, may be clamped against the inner surfaces of the window frame, as shown in Figure 1, so that the seat may be rigidly clamped in position and, therefore, the seat may be held by the clamping means and also by the straps.

The seat is formed with a section 8 below the forward edge, and this section is provided with a continuous groove 9 in the lower portion of which is a slidable bar 10, and above the bar 10 is a screw 11, which extends out of the opposite end 12 of the section, and it will be noted that the bar 10 may extend in one direction so that the block 6 on the outer end thereof may be clamped against the inner surface of a window, and the screw 11 may be forced out of the opposite end with the block 7 clamped against the inner surface of the window frame. The upper surface of the bar 10 is provided with a metal plate 13 having openings 14 therein, and it will be noted that a pin 15 may be inserted thru these openings to lock or hold the bar 10 in any position. The bar 10 is free to slide outward so that it may be placed against the surface of the window frame and then the pin 15 may be placed thru one of the openings to hold the bar in the outer position. The pin 15 is permanently attached to the lower portion of the seat by a chain 16. With

the block 6 held against the surface of the window frame, the screw 11 may be screwed outward by turning the nut 17, which is provided with handles 18 extending therethru and this nut may be continuously turned until the block 7 engages the inner surface of the opposite side of the window frame. The bar 10 is slidable in a channel shaped metallic member 19 in a slot 20 on the inside of the section 8, and on the inner end of the bar is a screw or projection 21 which will engage a plate 22 at the end of the section 8 to limit the outward movement of the bar. It will be noted that the bar is free to slide in or out of the end of the section 8 with the projection 21 limiting the outer movement and with the pin 15 preventing it moving inward, however, the pin 15 may be removed and suspended on the chain 16, so that the bar 10 may be moved inward until the block 6 engages the face of the plate 22. The screw 8 is also slidable in a channel shaped member 23 in the upper part of the groove 20, and the inner end of the screw is provided with a plate 24, which rides upon the upper edge of the channel, as shown in Figure 2, to prevent the screw turning, and this plate also engages a plate 25 at the end of the section 8 to limit the outward movement of the screw. It will be noted that as the nut 17 is turned, it will be moved toward a boss 26 on the surface of the plate 25, so that it will, therefore, move the screw 11 outward, however, when it is desired to move the screw inward, the nut 17 is turned in the opposite direction so that it travels on the screw, and the screw may then be pressed inward. The plates 22 and 25 are positioned on the ends of the section 8, and these may be held to the ends of the section by screws 27, as shown in Figure 1. The upper edges 28 and 29 of these plates may be bent over, as shown in Figures 1 and 3, so that they will permanently secure the seat downward, however, it will be understood that these plates may be formed in any manner and also that any means may be used for holding the seat.

Behind the section 8 are parallel bars 30 and 31, and below these bars are blocks 32, which form braces for the outside of the seat. A beam 33 extends across the bars 30 and 31, and the ends of this beam extend outward, so that the ends of the strap 3 may be attached thereto by eyes 34, as shown in dotted lines in Figure 2. These eyes may be attached to the ends of the beam in any manner, or the straps may be held to the beam or seat in any other manner. Clip angles 35 may be used between the ends of the bars 30 and 31, and the section 8, and an angular shaped plate 36 may be placed on the back of the section at the center thereof to rigidly attach the section to the seat and also to hold the inner end of a bolt in the design shown in Figure 5. A support 37 may also be attached to an eye 38 in the center of the section 8, and the ends thereof may be attached to bolts 39 and 40 on the under side of the beam 33, as shown in Figure 4. The support 37 may also be of any other shape or design, and may be attached to the parts in any manner. It will also be understood that any other means may be used for bracing or reinforcing the seat or any of its parts.

The back 2 is hinged to the rear of the seat by the hinges 4 and extends upward, as shown in Figures 2 and 3, or may be folded downward. Cross bars 41 and 42 extend across the upper ends of uprights 43 and 44. The hinges are attached to the uprights and the lower ends of the uprights extend downward beyond the seat so that they may engage the beam 33 to limit the backward movement of the seat. The seat may also be held in the upright position by a latch 45, which is pivotally attached on a member 46 extending upward from the back of the seat, as shown in Figure 3. The latch 45 may be turned to the position shown in Figure 3 to lock and hold the seat in the upright position, and may be turned to a vertical position to release the back when it is desired to fold it downward upon the seat.

The straps 3 may be of any size and may be formed of any material. It is preferred, however, to form these straps of leather and to provide elongated openings 47 therein so that a bolt 48 holding the ends of the straps to the upright portions thereof may readily pass thru the straps when it is desired to adjust the length thereof. The outer ends of the straps may be provided with clevises 49 by which they may be hooked over the lugs or eyes on the outer surface of the window frame. The lower portion of the straps may be provided with leather rings 50 to hold the free ends beyond the pins 48. The inner ends of the straps are attached to a cross strap 51, the ends 52 of which extend downward and are attached by screws 53 to the blocks 32, as shown in Figure 2. The ends 52 of these straps are attached to the straps 3 by pins or bolts at the point 54. The strap 51 extends across the back of the seat and, with the ends held in this manner, it will be noted that this strap forms a brace to limit the backward movement of the back of the seat. It will be understood, however, that any means may be used for holding the back of the seat and for attaching the straps 3 to the seat, or to any parts thereof.

The blocks 6 and 7 may be provided with extensions 55 forming grooves 56 at the outer edges of the blocks, and these grooves may be placed over beads, or the like, at the edges of the window frame. The extensions 55 may be of any other shape or design and may be arranged in any manner.

In the design shown in Figure 5 the bar 10 and the screw 11 are removed, and a block 57 may be placed in the groove 20, and a clip 58 may be positioned on the face of the section 8 with a bolt 59 extending therefrom thru an opening 60 extending thru the section 8 and the member 57. In this design it will be noted that the inner end of the bolt 59 may be held by a nut 61 so that it may readily be removed and replaced and, therefore, used or discarded as desired. The clip 58 is formed with a hook shaped lower portion 62 which may be hooked over a bar 63 on the window sill, as shown in Figures 5 and 6. This bar may be attached to the edge of the window sill in such a manner that the hook 62 of the clip 58 may be hooked over it in order to hold the lower edge of the seat to the window sill. It will be noted that in order to place the hook thru the bar it will be necessary to hold the seat in such a position that the seat portion is substantially vertical and then, as the seat is straightened up, the hook will pass thru the space under the bar and around the bar. This provides a positive means for holding the lower edge of the seat in place, extending outward from a window sill and with the straps attached to the upper part of the window frame, the seat will be positively secured in place. This attachment is particularly adapted for windows in office buildings where the section of the frame beyond the glass is substantially narrow, and where the width of the window sill is reduced to a mini-

mum. When using the device on windows of this type, the blocks **6** and **7** may be inverted so that the clips **55** may extend into slots provided with the window sash, or other grooves or slots in the sides of the window frame. It will be understood, however, that the blocks **6** and **7** may be omitted when the device is used on windows of this type, and also that any other means may be used for holding or clamping the seat to window frames of different types or designs.

The cross bars **41** and **42** on the back are held by bolts **64** with the heads countersunk in the members **41** and **42**, and with the ends held in special nuts **65**, the outer surfaces of which are curved so that they resemble buttons, and the ends of the bolts are threaded into these buttons from the flat sides thereof. It will be understood that these buttons or nuts **65** may be used on the ends of all bolts holding parts of the device, however, it will be understood that nuts of any type may be used and also that the bolts may be held in any manner.

It will also be understood that any material may be used in the construction of the device, however, it is preferred to use material of a comparatively light weight, and the main portions may be made of wood with the bar **10** made of hickory and lined with a metallic plate **13**, by which it may be reinforced and also which provides better holding means for the pin **15**. This bar, however, may be made of any material.

It will be understood that other changes may be made in the construction without departing from the spirit of the invention. One of which changes may be in the use of a seat of any other type or design, another may be in the use of other means for supporting the seat in place of the straps, another may be in the use of other means for attaching the straps to the seat, another may be in the use of other means for operating and holding the clamping means extending outward from the ends of the seat, and still another may be in the use of other means for attaching or holding the different parts to the seat or to any parts thereof.

The construction will be readily understood from the foregoing description. In use the seat may be provided as shown and described, and it will be noted that when it is desired to clean a window the seat may be placed upon the window sill with the lower sash raised and the upper ends of the straps **3** may be hooked over lugs or eyes **5** on the window frame. The seat may then be swung to the correct position and the bar **10** moved out of one end until it engages the side of the window frame, at which time the pin **15** may be inserted therein to hold it in the outer position. The screw **11** may then be screwed outward until it engages the opposite surface of the window frame, and the nut **11** may be turned to secure the block **7** against the frame, thereby positively clamping the seat in position. With the seat, therefore, rigidly held by the straps and clamping means, anyone can comfortably sit upon the seat while cleaning the outside of the sash. The seat may also be positioned with the blocks **32** resting upon the window sill, and the blocks may be of any shape to compensate for the slope of the sill, or any means may be used to support the device from the sill.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. The combination with a window seat of the type adapted to be clamped on the inside of a window frame with the seat extending outward in which the seat comprises a flat portion forming the seat, a back hinged to the outer edge of the seat, a strap limiting the backward movement of the back, straps at the ends adapted to be attached to the upper part of the window frame, and means adjusting the length of said strap; of additional holding means comprising a threaded rod extending into a casing under the seat provided with a nut for forcing said rod outward in clamping relation, and another rod having holes therein adapted to extend out of the opposite end of the seat and adapted to be held by pins in clamping relation to the seat.

2. A seat as described in claim 1 characterized in that a hook is provided on the inner surface of the seat adapted to engage an eye on the window sill.

3. A window cleaning seat as described in claim 1 characterized in that the screw and bar with the holes therein are both substantially of the same length as the seat, and both positioned, one above the other in a casing below the forward edge of the seat.

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