June 23, 1953 J. J. HRUSKA 2,642,609

ADJUSTABLE HANDLE MOUNTING FOR WINDOW CLEANING DEVICES

Filed Nov. 20, 1950 2 Sheets-Sheet 1

Fig. 1.

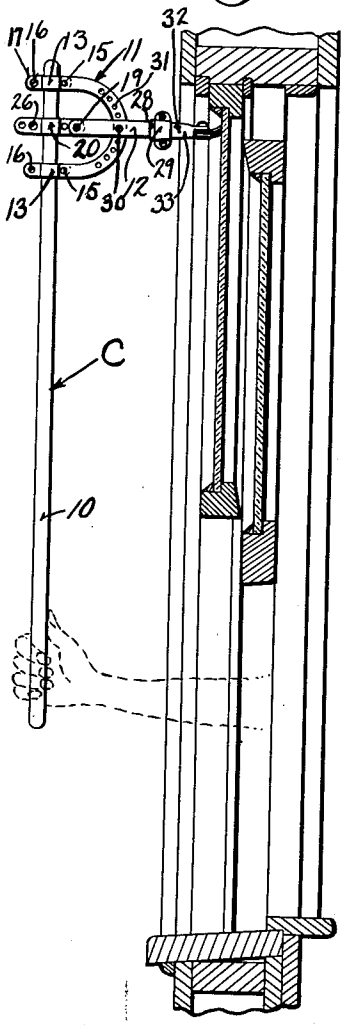


Fig. 2.

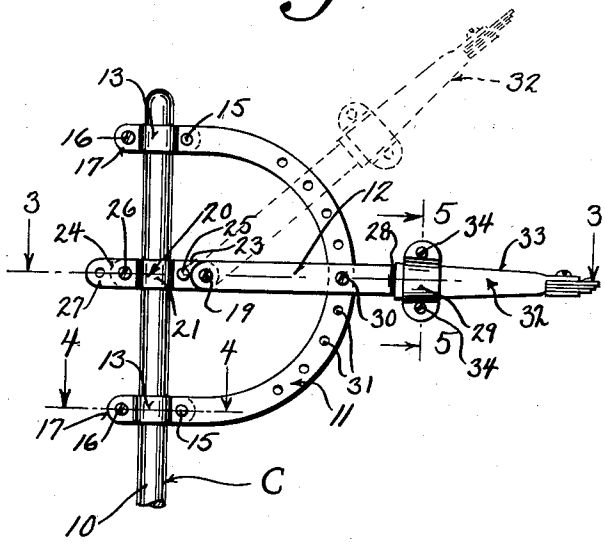


Fig. 3.

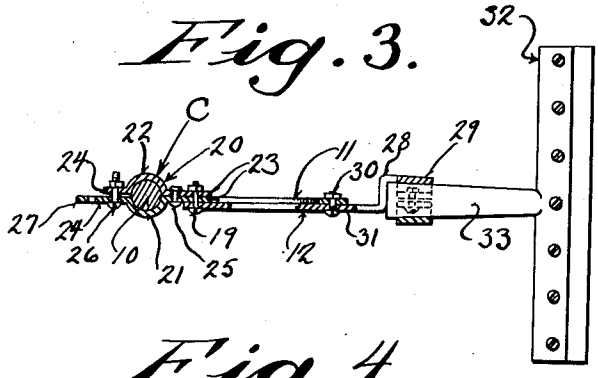


Fig. 4.

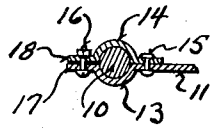
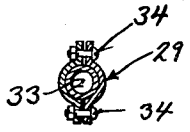


Fig. 5.



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June 23, 1953 J. J. HRUSKA 2,642,609

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Filed Nov. 20, 1950 2 Sheets-Sheet 2

Fig. 6.

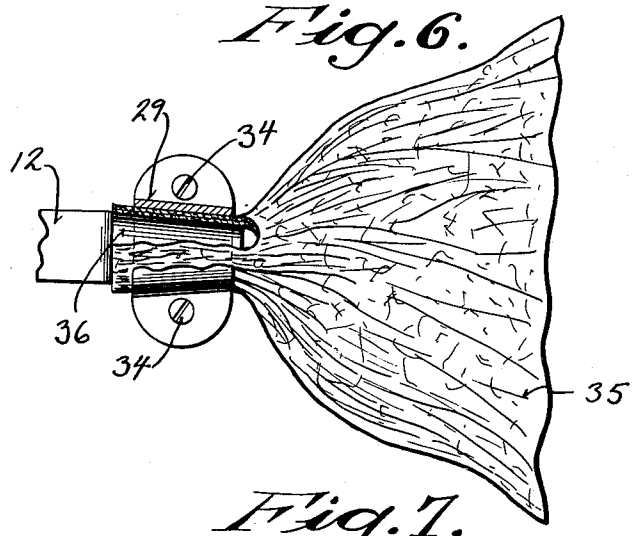


Fig. 7.

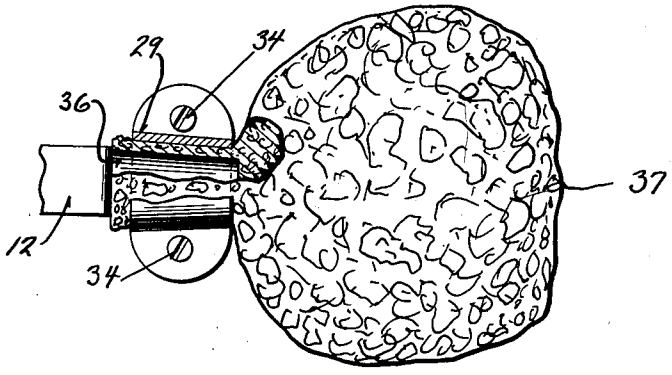
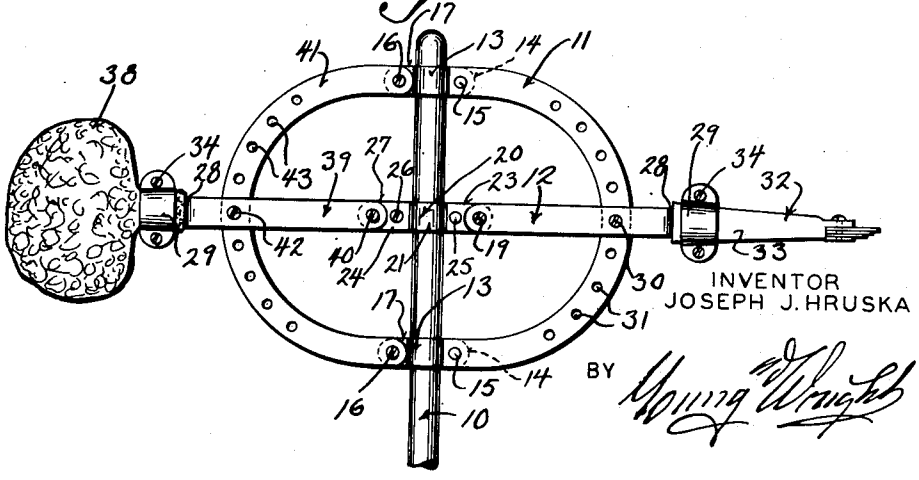


Fig. 8.



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Patented June 23, 1953

2,642,609

UNITED STATES PATENT OFFICE

2,642,609

ADJUSTABLE HANDLE MOUNTING FOR WINDOW-CLEANING DEVICES

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Application November 20, 1950, Serial No. 196,675

1 Claim. (Cl. 15—144)

1

This invention appertains to the cleaning and washing of windows and more particularly to a novel device for facilitating the cleaning of the inside and outside of windows.

One of the primary objects of my invention is to provide a simple cleaning implement, which can be effectively used from the inside of a room, and thus eliminate the necessity of sitting on a window sill and hanging out of the window, or the employment of ladders and safety belts.

Another salient object of my invention is to provide a window cleaning appliance which merely embodies an elongated handle and an adjustable cleaning arm connected to the handle which can be quickly fastened at a desired cleaning angle, the construction being such that the device can be readily placed outside of a window from the inside of a room and manipulated for cleaning the outside surfaces of window panes.

A further object of my invention is to provide novel means for quickly and interchangeably associating various cleaning elements, such as cloths, sponges, squeegees, and the like, with the cleaning arm.

A further important object of my invention is to provide a window cleaning appliance embodying an elongated operating handle having rigidly secured thereto at one end thereof a semi-circular guide brace strip for an adjustable cleaning arm, the cleaning arm being pivotally secured at its inner end to the handle and at the axis of the brace strip so that the cleaning arm can be moved over the brace strip to different angular positions, means being provided for securing the cleaning arm to the brace strip in a selected cleaning position.

A still further important object of my invention is to provide a window washing device of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture, and one which can be placed upon the market at a reasonable cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described and claimed, and illustrated in the accompanying drawings, in which drawings,

Figure 1 is a side elevational view of my improved window washing and cleaning device, showing the same in use for cleaning the outside of a window, the window and window frame being shown in vertical section.

Figure 2 is an enlarged fragmentary detail side elevational view of the window cleaner showing

2

the cleaning arm in one adjusted position in full lines and in another adjusted position in dotted lines.

Figure 3 is a horizontal sectional view through the device taken on the line 3—3 of Figure 2 looking in the direction of the arrows.

Figure 4 is a detail sectional view taken on the line 4—4 of Figure 2, looking in the direction of the arrows, illustrating the means employed for clamping the semi-circular guide and brace strip to the handle.

Figure 5 is a detail transverse sectional view through the cleaning arm taken on the line 5—5 of Figure 2, looking in the direction of the arrows, illustrating one means for holding a cleaning implement such as a squeegee, to the arm.

Figure 6 is an enlarged fragmentary detail side elevational view, partly broken away and in section, illustrating one means for connecting a washcloth with the cleaning arm.

Figure 7 is a view similar to Figure 6, illustrating one means for connecting a sponge to the cleaning arm.

Figure 8 is a fragmentaray side elevational view showing a slightly modified form of the invention, in which a pair of cleaning arms can be associated with the handle.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter C generally indicates the novel window washer and cleaner and the same includes an elongated handle, 10, preferably, but not necessarily formed from wood. Detachably and rigidly clamped to one end of the handle 10 is a substantially semi-circular guide and brace strip 11, for a cleaning arm 12, which will be later more fully described.

The semi-circular guide and brace strip 11 is preferably formed from flat metal and the inner ends of the strip are formed to provide semi-circular clamp sections 13 for receiving the handle 10. Companion clamp sections 14 are provided for the ends of the strip and the sections 13 and 14 are firmly secured together and in clamping position about the handle by inner rivets 15 and outer removable bolts 16. It is to be noted that the clamp section 13 and the clamp section 14 are provided respectively with aligned ears 17 and 18, through which the bolts 16 extend. In this manner, the semi-circular guide and brace strip 11 is firmly secured to the handle.

The cleaning arm 12 is also preferably formed from a flat strip of metal and is pivotally secured at its inner end on a bolt 19 carried by a split

clamp collar 20. The split clamp collar 20 is located on the handle equidistant between the ends of the strip 11 and this split collar includes a semi-circular clamp section 21 and a companion semi-circular clamp section 22. The opposite ends of these clamp sections 21 and 22, are provided with radially extending inner and outer ears 23 and 24. The inner ears 23 can be firmly connected together by a rivet 25 and the pivot bolt 19 for the cleaning arm 12 is supported by these inner ears 23. The outer ears 24 of the split collar 20 are connected together by a bolt 26 and one of the outer ears is provided with an apertured extension 27, the purpose of which will later appear. The outer end of the cleaning arm 12 is laterally offset, as at 28, and carries a split collar 29 for supporting a desired cleaning implement. From the construction so far, it can be seen that the cleaning arm 12 carries a cleaning implement which can be swung on its pivot 19 over the semi-circular guide and brace strip 11 to a desired selected position. The arm can be firmly secured at its selected adjusted position in any desired way, such as by the use of a bolt 30, which can be placed in any one of a series of openings 31 formed in the brace and guide strip 11.

As shown in Figures 1, 2 and 3, a cleaning implement such as a squeegee 32 is detachably clamped on the arm 12 and it is to be noted that the squeegee 32 is provided with a shank 33, which is inserted in the split collar 29. After the squeegee is in place, the split collar can be contracted into intimate contact with the shank 33 by adjustable bolts 34, which pass through the ears formed on the sections of the split collar. The offset 28 of the arm 12 is provided so that the shank 33 will project substantially radially from the handle 10.

Obviously, various types of cleaning elements can be associated with the cleaning arm 12, and as shown in Figure 6, a washcloth 35 can be inserted in the split collar 29 and in this instance, I preferably use a tapered plug 36, which is forced into the split collar 29, in such a manner as to clamp a part of the collar between the tapered plug 36 and the inner surface of the split collar 29. It is to be also noted that the collar 29 is tapered toward its forward end to agree with the taper of the plug 36.

In Figure 7, I have shown a sponge 37 used in connection with the cleaning arm 12 and the sponge can be secured to the split collar 29 in the same manner as the washcloth, namely, a part of the sponge can be forced into the split collar 29 and then the plug can be forced into the collar so as to clamp a portion of the sponge between the same and the inner surface of the split collar.

In use of my improved window cleaning device, the desired cleaning implement is associated with the arm 12 and the handle 10 can be grasped adjacent to its lower end, see Figure 1, and the device can then be placed out of the window and the cleaning element employed can be readily and efficiently moved over the outer surface of the window panes to be cleaned.

As the cleaning of the window proceeds, the different types of cleaning elements can be removed from and associated with the cleaning arm.

In Figure 8, I have shown a modified form of my device in which two different types of cleaning elements can be simultaneously associated with the handle 10. In Figure 8, I have shown the squeegee 32 associated with the cleaning arm 12 and a sponge 38 associated with a second cleaning arm 39. This cleaning arm 39 is of the same character and shape as the cleaning arm 12, and is connected to the split collar 20 by a pivot bolt 40, which is inserted through the apertured extension 27 of said split collar 20. Where I employ the second cleaning arm 39 I also employ a second semi-circular guide and brace strip 41 and the terminals of this brace strip are secured in place by means of the bolts 16 which are utilized for holding the guide and brace strip 11 in place. The cleaning arm 39 travels over the guide and brace strip 41 and is held in a selected adjusted position thereon by means of a bolt 42 which can be inserted in any one of a plurality of openings 43 formed in said strip 41.

Where I employ an additional cleaning arm 39 and an additional guide and brace strip 41, the sponge 38 can be saturated with a cleaning solution and the window washer cleaner C can be placed out of the window and after the cleaning of the window panes with the sponge, the handle 10 can be turned around so that the squeegee 32 can be brought into engagement with the panes.

Various changes in details may be made without departing from the spirit or the scope of this invention, but what I claim as new is:

A device for facilitating the cleaning of the outside of windows from the inside of a room comprising a smooth uniform elongated handle, a semi-circular guide and brace strip projecting laterally from one side of the handle adjacent to the outer end thereof, means detachably clamping the terminals of the strip to the handle, a split clamping cuff detachably secured to the handle at a point equidistant between the terminals of the strip, an arm pivotally and detachably secured to the cuff for movement over the guide and brace strip, means securing the arm in a selected adjusted position to the strip, said arm projecting beyond the strip, a window cleaning element, and means detachably securing the window cleaning element to the outer end of the arm.

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