Jan. 10, 1928. 1,655,585

G. A. WAGNER

WINDOW CLEANER

Filed May 4, 1925

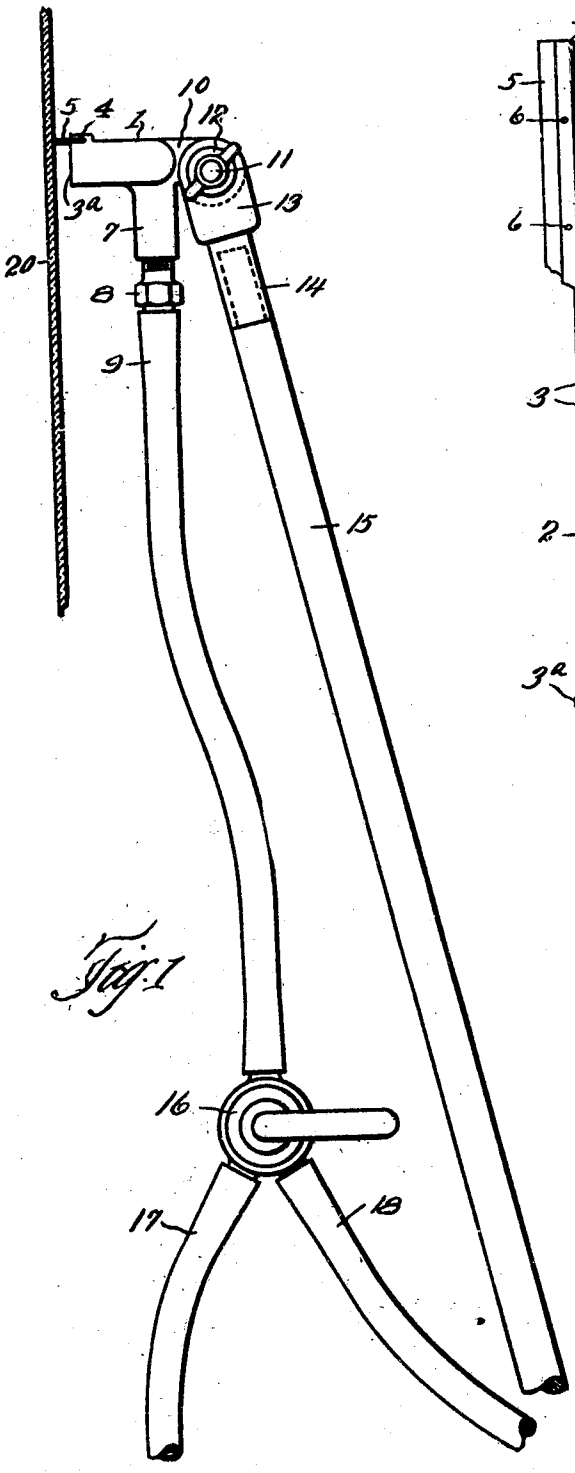


Fig. 1

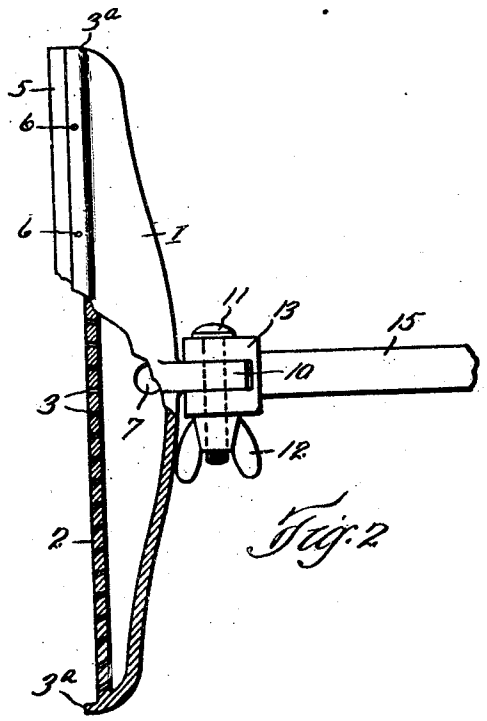


Fig. 2

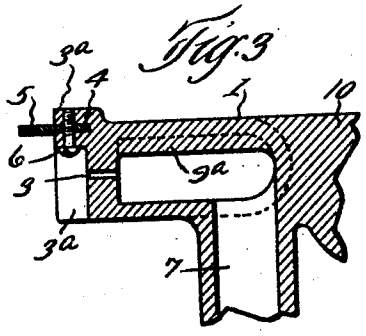


Fig. 3

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WINDOW CLEANER.

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This invention relates to washing apparatus and is directed more particularly to an apparatus for cleaning and washing window panes and similar surfaces.

The primary object of the present invention is to provide a particularly simple and inexpensive form of apparatus which shall include means for washing and means for drying window panes and like surfaces.

Another object is to provide apparatus of this character which may be easily manipulated by one operator and shall effect a large saving in time over the present day hand methods of washing windows.

With these and other objects in view the invention will be stated to consist in the provision of a washing head adapted to be manually controlled by the operator and a connection to such head for alternately supplying washing fluid under pressure or a drying fluid under pressure as occasion may demand.

In the drawing accompanying and forming a part of this application, Fig. 1 is a side elevation of a washing apparatus constructed in accordance with my invention showing the same applied to a surface to be washed, such surface being shown in section; Fig. 2 is a bottom plan view partly in section, of the washing head; and Fig. 3 is a fragmentary transverse sectional view of the washing head.

Describing the various parts by reference characters, 1 denotes the washing head which is preferably in the form of a hollow aluminum casting so that the same will be light in weight and neat in appearance. This casting is formed with an elongated flat operating surface 2 which is provided with a plurality of small apertures 3 that communicate with the interior of the head. As shown in Fig. 2 I preferably arrange these apertures at an angle with respect to the central axis of the head so that fluid emitting therefrom will diverge outwardly from each side of the head. A flange 3^a projects forwardly from surface 2 along the top and sides thereof and the top portion of this flange is formed with a groove 4 extending therealong. This groove is adapted to receive a squeegee or wiping element 5 therein, which is retained in position by screws 6 or other suitable fastening means.

As shown in Figs. 2 and 3, the head 1 is formed with a hollow interior which communicates with a tubular projection 7 formed on one side of such head and the outer end of this projection is threaded to receive a coupling 8 so that a conduit 9 may be connected with the head. Referring to Fig. 3, it will be noted that I preferably provide a rib 9^a on the inner side of the wall opposite tubular inlet 7 so that fluid entering the head will be diverted to some extent to each side thereof and thus insure a uniform distribution of fluid from apertures 3. The head 1 is also formed with an outwardly projecting lug 10, to which is pivotally fastened by means of a bolt 11 and a wing nut 12, a bifurcated handle support 13. The outer end of handle support 13 is socketed as indicated at 14 to receive a handle 15.

The conduit 9 connects at one end to the head as previously described and at the other end this conduit is connected to a two-way valve 16, the branches whereof are connected to suitable conduits 17 and 18, one of which connects with a source of cleaning fluid under pressure, such as water, and the other of which connects with a source of drying fluid under pressure, such as air which if desired may be heated to facilitate the drying operation.

In operation, the conduits 17 and 18 are connected to the aforementioned sources of cleaning and drying fluids, which if desired may be mounted on a small hand truck so as to be portable. The cleaning head 1 is adjusted with respect to handle 15 by means of the bolt 11 and wing nut 12. The operator then rotates two-way valve 16 to admit the cleaning fluid to conduit 9 and head 1. The cleaning fluid is ejected from the head through the angularly disposed apertures 3 and is sprayed against the window pane 20 or other surface to be cleaned. Splashing is avoided by the flange 3^a deflecting the cleaning fluid back against the pane 20. By moving the head about, the entire surface may be quickly sprayed with cleaning fluid and if necessary the squeegee or wiper 5 may be used to loosen the dirt adhering to the pane. After the pane has been cleaned, the operator rotates valve 16 to shut off the supply of cleaning fluid and admit the drying fluid, such as air to conduit 9 and head 1. The cleaning head 1 is moved in the usual manner to cause squeegee or wiper 5 to remove the excess cleaning fluid from the pane

and during such operation, the drying fluid will be ejected through apertures 3 to facilitate the drying operation.

A device of this general character is simple and inexpensive to produce and may be easily handled by unskilled help. The washing and drying operation is easily and quickly accomplished and the device is especially suited for washing windows of large office building, hotels and similar structures.

Having thus described my invention, what I claim is:—

1. A cleaning apparatus of the character set forth comprising a cleaning head having a plurality of apertures therein and a conduit connected with said head, a wiping element carried by said head, means for supplying a cleaning fluid to said head, said head having a flange formed thereon about the top and sides of said apertures and forming a hood thereabout whereby to direct the cleaning fluid against the surface being cleansed and to prevent splashing of the same.

2. A cleaning apparatus of the character set forth comprising a cleaning head having a plurality of apertures therein and a conduit connected with such head, a wiping element projecting from said head, a flange extending from the top and sides of said head and forming a hood about said apertures, and means for delivering a cleaning fluid through said apertures.

3. A cleaning apparatus of the character set forth comprising a hollow cleaning head having a plurality of aperatures arranged at an angle with respect to the central axis of such head, a squeegee or wiper carried by said head and disposed in operative relation to said apertures, a handle pivotally connected to said head, a conduit connected to said head, a flange extending from the top and sides of said head and forming a hood about said apertures and means for delivering a cleaning fluid through said apertures.

4. A cleaning apparatus of the class described comprising a hollow cleaning head having a plurality of apertures therein, said head having a flange thereon extending about the top and sides thereof whereby to prevent splashing of liquid delivered through said apertures onto a surface being cleaned, a wiping element carried by said flange, a handle pivotally secured to said head, a conduit connected with said head and having a pair of branches adapted for attachment to the source of air supply and a source of liquid supply respectively, and a valve for selectively controlling the flow of liquid and air through said conduit.

In testimony whereof, I hereunto affix my signature.

GUSTAVE A. WAGNER.