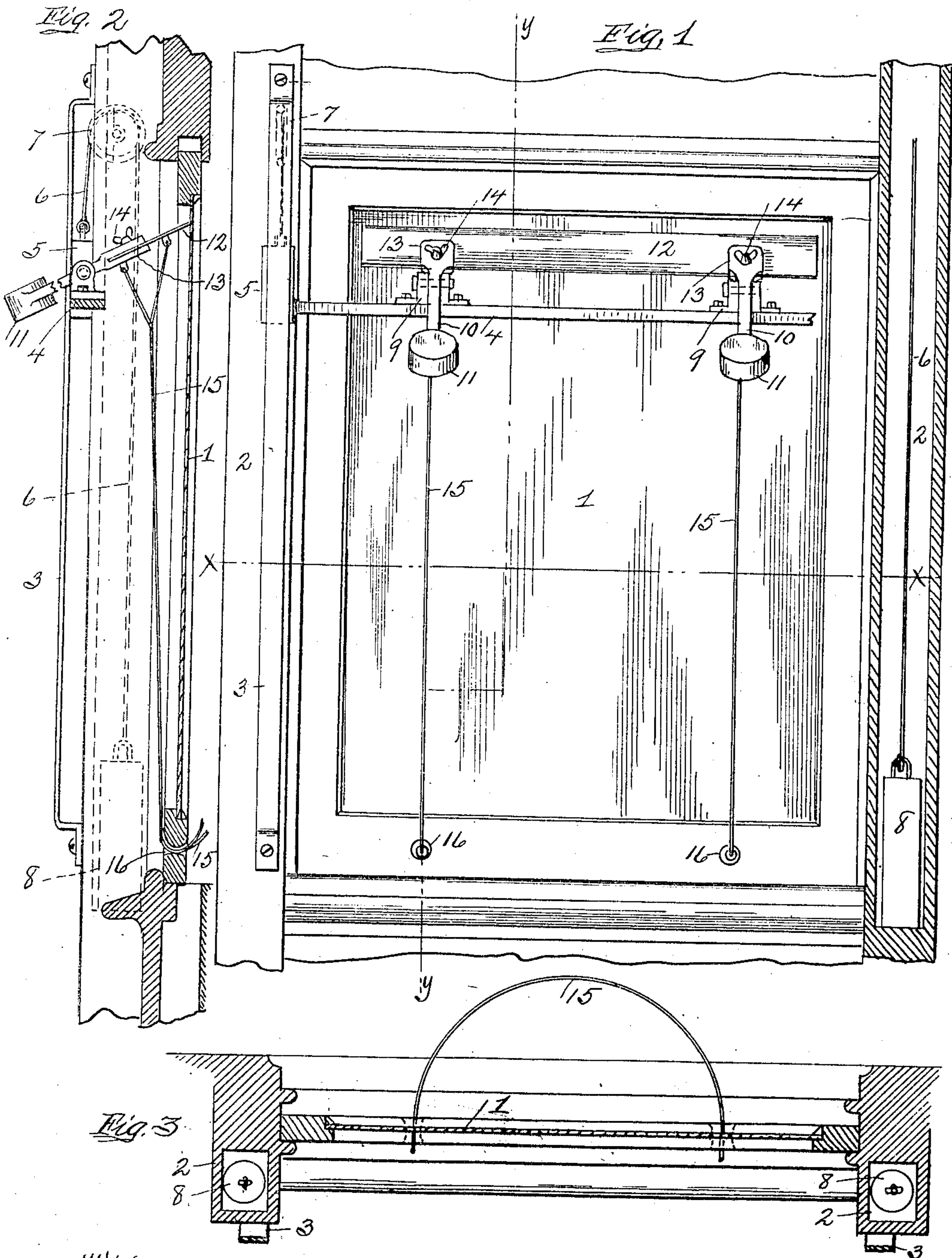


No. 815,782.

PATENTED MAR. 20, 1906.

H. BEATTY.  
WINDOW CLEANER.  
APPLICATION FILED APR. 20, 1905.



Witnesses:  
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Att'y.



# UNITED STATES PATENT OFFICE.

HUGH BEATTY, OF PITTSBURG, PENNSYLVANIA.

## WINDOW-CLEANER.

No. 815,782.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed April 20, 1905. Serial No. 256,646.

*To all whom it may concern:*

Be it known that I, HUGH BEATTY, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Window-Cleaners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to an improved device for cleaning the outside of car-windows of frost and snow, and is particularly useful to motormen in the winter season; and it consists in the certain details of construction and combination of parts as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a front elevation of a street-car window, partly in section, the same being provided with my improved device, which is constructed and arranged in accordance with my invention. Fig. 2 is a side sectional elevation of the same, the said section being taken on the line *y y* of Fig. 1. Fig. 3 is a horizontal sectional view on the line *x x* of Fig. 1.

To put my invention into practice, and thereby provide a device whereby the motorman of a street-railway car may easily remove frost or snow from the front or outside of the window-glass 1, I arrange at either side of the sash vertical box-frames 2 for incasing suitable moving weights 8. Attached to these boxes are guide-strips 3, the one parallel to the other, and in which a sliding bar 4 is arranged in a horizontal position, the said bar being formed with end slides 5, capable of being moved the length of the guide-bars 3. Mounted upon the horizontal bar 4 are two bearings 9, in which levers 10 are pivoted by means of transverse pins, the said levers being provided at their outer ends with weights 11, the inner ends 13 being bifurcated to receive a rectangular scraper 12, which is held in place by set-screws 14. Attached to the slides 5 of the bar 4 are cords 6, which pass over pulleys 7, located at the top

of the boxes 2, the other ends of said cords being connected to weights 8 in a manner that will keep the scraper 12 in its elevated position at the top of the window-sash. Attached to the inner ends of the two levers 10 are cords 15, each of which is bifurcated at its upper end, one terminal being attached to the scraper 12 and the other to the lever 10, the lower end of the cords being threaded through openings 16, formed in the lower rail of the window-sash.

In operation when the device is at rest the scraper 12 is held free from the glass by the weights 11 on the ends of the levers 10, and the window may be opened or shut without interference. If it is desired to scrape the glass 1 and clear the same from snow, &c., it is only necessary to draw the cord 15 inward. This will bring the scraper 12 in contact with the glass and move the said scraper downward along the length of the same. When the cord 15 is released, the weights 8 will return the scraper 12 back to its normal position.

It is obvious that various slight modifications and changes may be made in the details of construction without departing from the spirit of the invention. Therefore I do not wish to confine myself to the exact construction shown and described, but wish to claim all such modified forms as would come properly within the general scope of the invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An apparatus for cleaning windows, comprising guide-strips attached to the window-sash, vertically-movable slides arranged between the sash and said strips, weights arranged in the sash and connected to said slides, a horizontally-disposed bar carried by said slides, a plurality of bearings mounted on said bar, a weighted lever pivotally mounted in each bearing, a scraper carried by said levers and cords connected to said scraper and extending through holes into the bar of the window-sash.

2. In an apparatus for cleaning windows, the combination with balanced slides mounted to move vertically on the window-frame,

a bar carried by said slides and extending  
across the window, a counterweighted  
scraper pivotally mounted on said bar and a  
cord connected to said scraper and extending  
5 downwardly in front of the window to the  
bottom thereof, and through holes in the  
window-sash.

In testimony whereof I affix my signature  
in presence of two witnesses.

HUGH BEATTY.

Witnesses

FRED. O. HENZI,  
H. J. LEVIS.