

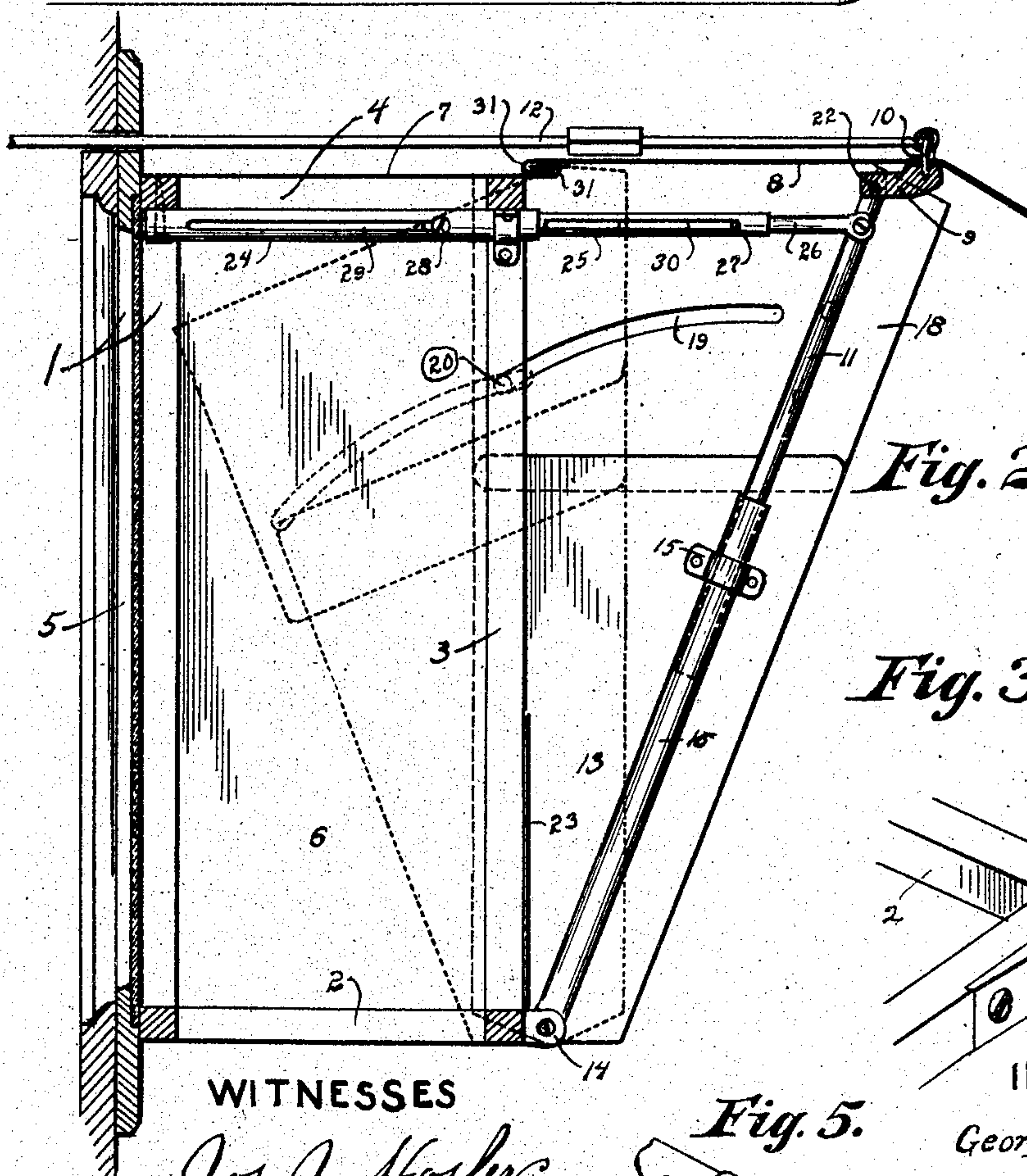
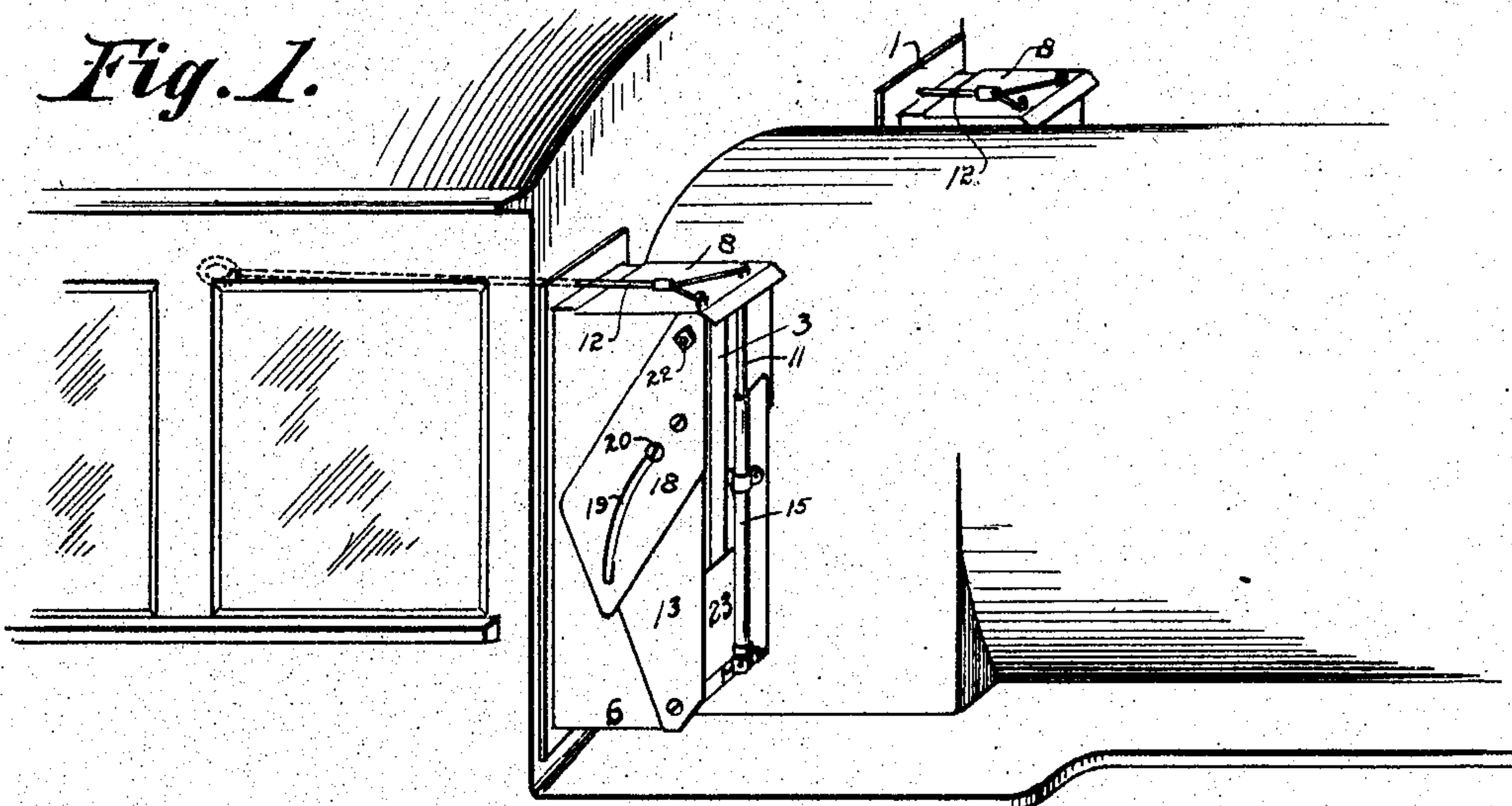
No. 786,893.

PATENTED APR. 11, 1905.

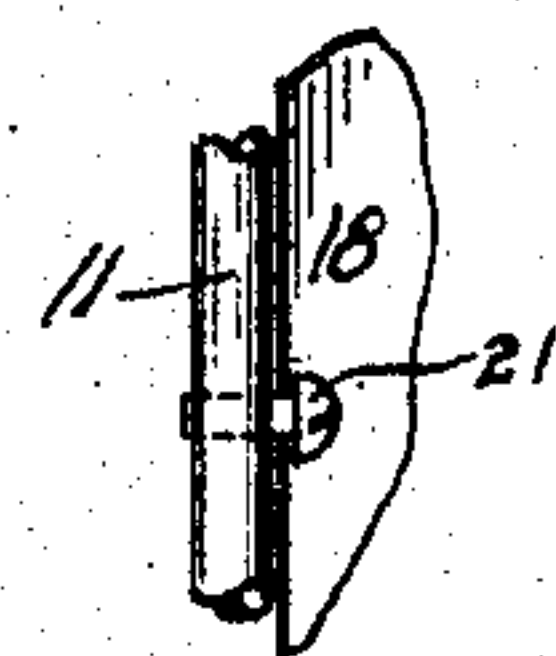
G. E. HARSH,  
STORM WINDOW.

APPLICATION FILED FEB. 1, 1905.

*Fig. 1.*

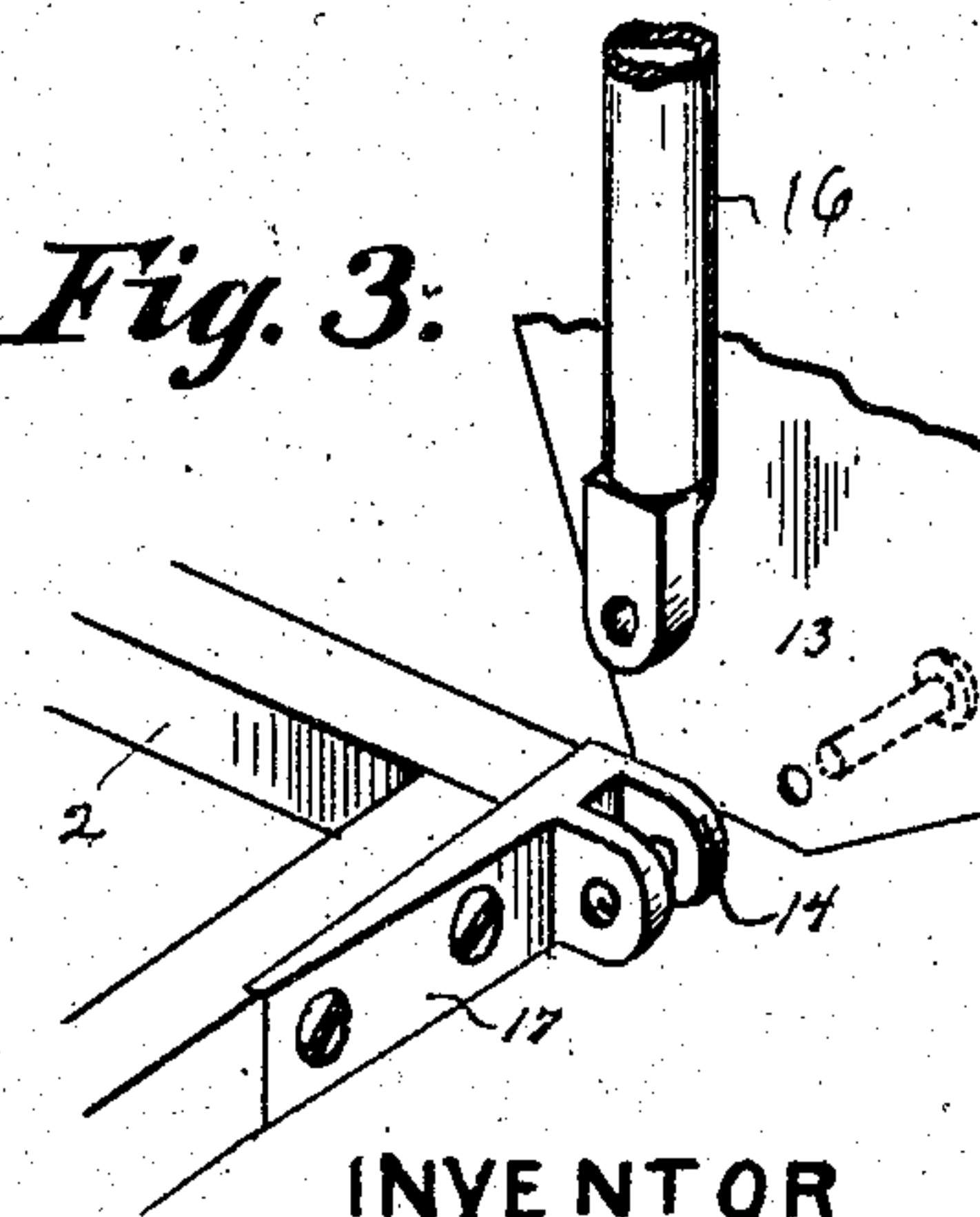


*Fig. 4.*



*Fig. 2.*

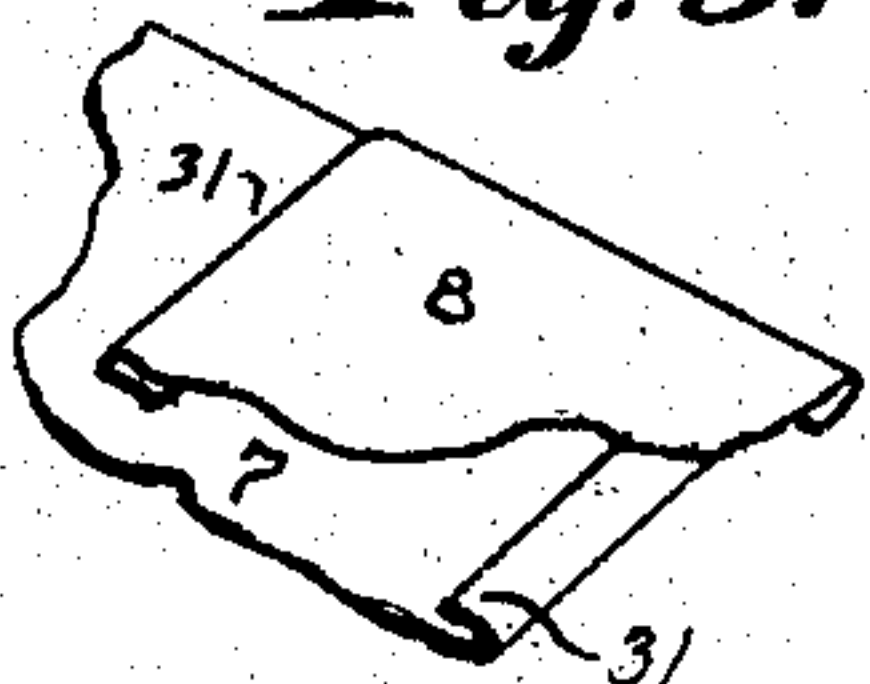
*Fig. 3.*



WITNESSES

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*Fig. 5.*



INVENTOR

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# UNITED STATES PATENT OFFICE.

GEORGE E. HARSH, OF CARROLLTON, OHIO.

## STORM-WINDOW.

SPECIFICATION forming part of Letters Patent No. 786,893, dated April 11, 1905.

Application filed February 1, 1905. Serial No. 243,761.

*To all whom it may concern:*

Be it known that I, GEORGE E. HARSH, a citizen of the United States, residing at Carrollton, in the county of Carroll and State of Ohio, have invented certain new and useful Improvements in Storm-Windows; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the numerals of reference marked thereon, in which—

Figure 1 is a view showing the window applied to a locomotive-cab. Fig. 2 is a vertical section showing the window-hood extended. Fig. 3 is a view showing the bottom or lower end of one of the supporting-tubes and its frame-hinge. Fig. 4 is a view showing a portion of one of the upper supporting-bars and a portion of one of the side members of the hood connected thereto. Fig. 5 is a view showing portions of the fixed top and the movable top hood member.

The present invention has relation to storm-windows more especially designed for the forward windows of a locomotive-cab; and it consists in the novel arrangement hereinafter described, and particularly pointed out in the claims.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the window-frame proper, which is formed of a size to correspond with the size of the window designed to be constructed and protected. To the bottom or lower portion of the window-frame 1 extends a horizontal frame 2, to the forward portion of which is attached the vertical frame 3, to which vertical frame is connected the top frame 4, said various frames constituting a structure located in front of the window-frame 5. To the sides of this forward extended frame or structure are attached metal sides 6, which are held in fixed relative position with reference to the frame located in front of the window-pane.

To the top or upper frame 4 is attached the metal sheet or covering 7, to which top is adjustably attached the slidable extension 8, to

which slidable extension is connected the bar 9, which bar is for the purpose of providing means for attaching the staples 10 and the top or upper ends of the bars 11. To the staples 10 are attached the bifurcated ends of the adjusting-rod 12, which adjusting-rod is extended rearward and in such a position that when the present invention is applied to the windows of a locomotive-cab it can be reached and operated by an engineer or fireman for the purpose hereinafter described.

The lower side plates 13 are pivotally attached at their bottom or lower ends to the flanges 14 or their equivalents, and for the purpose of imparting movement to the lower side plates 13, as hereinafter described, they are provided with the clips 15, which clips hold the tubes 16, which tubes receive the lower portions of the rods 11. The tubes 16 are pivotally attached or hinged to the flanges 14, which flanges are preferably formed integral with the plates 17, which plates are securely attached to the lower frame 2. For the purpose of closing the sides when the extension 8 is moved forward for the purpose hereinafter described the top side plates 18 are provided, which top side plates are provided with the curved slots 19, through which slots are passed the screws 20, which screws are secured to the vertical members of the forward frame 3 and are for the purpose of assisting in holding the top plates in proper relative position. For the purpose of causing the side plates 18 to move forward with the forward movement of the extension 8 the rods 11 are attached to the side plates 18 by means of rivets or screws 21. The top side plates 18 are also connected at their top or upper ends to the bolt 22, which bolt is also connected to the bar 9 and the rods 11, pivotally attached at their upper ends to the bolt 22, by which arrangement a pivotal connection is provided for the top or upper portions of the plates 18 and the top or upper ends of the rods 11.

When it is desired to protect the pane of glass 5 from storms, especially snow and heavy rain storms, the plates 13 and 18, together with the extension 8, are moved forward, thereby producing an extended hood,



which extended hood when brought into use is located substantially as shown in Fig. 2, and for the purpose of protecting the top or upper portion of the hood the slidable extension 8 is bent downward at its front or forward edge, substantially as illustrated in the drawings, and for the purpose of protecting the bottom or lower portion of the hood proper the dash-plate 23 is provided, which dash-plate is preferably attached to the forward edges of the vertical members of the forward frame 3. It will be understood that said dash-plate should not be formed of such a height that it will obstruct the view, but is for the purpose of preventing snow and rain from coming in contact with the bottom or lower portion of the window-pane 5. When it is desired to withdraw or close the hood, the rod 12 is moved or pulled in the direction that will bring the various parts operated by said rod into the position illustrated in Fig. 1, which is the normal position of the devices illustrated.

For the purpose of providing suitable guides for the rods 11 the tubes 24 are provided, which tubes receive the tubes 25, and the tubes 25 receive the rods 26, the outer ends of which are pivotally attached to the rods 11. For the purpose of limiting the outward movement of the side plates 13 and 18 the rods 26 are provided with the stop-pins 27 and the tubes 25 provided with the stop-pins 28, which stop-pins are located through the slots 29 and 30, said stop-pins and slots being so arranged with reference to each other that they will limit or stop the outward movement of the extensions 8 at the time the hooked flanges 31, formed upon the top 7 and extension 8, are brought into proper engagement, thereby preventing any accidental bending of said flanges.

It will be understood that as the plates 13 and 18 are moved forward to provide an extended hood the distance between the lower pivoted ends of the tubes 16 and the extreme upper ends of the rods 11 will be lengthened, and in order to compensate for this change of distance the rods 11 are adapted to slide or telescope in the tubes 16 when the different parts are brought into the position illustrated in Fig. 1, and of course the rods 11 will be moved upward longitudinally during the time they are carried forward.

The upper side plates are so formed that when they are brought forward their upper edges will come under and in contact with the bottom or under side of the extension 8, by which arrangement the sides of the extension

or hood are properly closed. By providing the curved slot 19 the upper side plates 18 are permitted to assume the position illustrated in Fig. 1 when the parts constituting the hood are brought back or in their normal position. The screws 20 being held in fixed position cause the plates 18 to automatically assume the lowered positions illustrated in Fig. 1, and when the side plates 18 are moved forward the screws 20, which are located through the slots 19, cause the plates 18 to be elevated in such a manner that their upper edges are brought in proper contact with the bottom or under side of the extension 8.

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

1. In a storm-window, the combination of a window-frame, a frame located upon the outer side of the window-frame proper having closed sides and top, a top extension adapted to slide over the fixed top of the frame, pivoted lower side plates and upper side plates, said plates adapted to be carried forward with the forward movement of the top extension, a bar secured to the movable top and an operating-rod secured in operative relation with the top extension, substantially as and for the purpose specified.

2. In a storm-window, the combination of a window-frame, and a frame located upon the outer side of the window-frame having closed sides and top, movable hood side plates, tubes secured to the lowermost hood side plates and rods adapted to telescope in the tubes, said rods secured to the uppermost side plates, and an operating-rod adapted to extend and withdraw the side plates of the hood, substantially as and for the purpose specified.

3. In a storm-window of the class described, a window-frame, a frame located upon the outer side of the window-frame having fixed closed sides and top, a top extension adapted to slide upon the fixed top, tubes pivoted at the bottom or lower ends, rods telescoping in said tubes, guide-tubes held in fixed relation, tubes adapted to slide in the guide-tubes, and rods pivotally attached to the rods located in the pivoted tubes, and an operating-rod, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE E. HARSH.

Witnesses:

WALLACE BEAMER,  
JAMES HOLDER.