No. 853,902. PATENTED MAY 14, 1907.

H. R. SCHWEINLER.

WINDOW.

APPLICATION FILED NOV. 16, 1906.

Fig. 1.

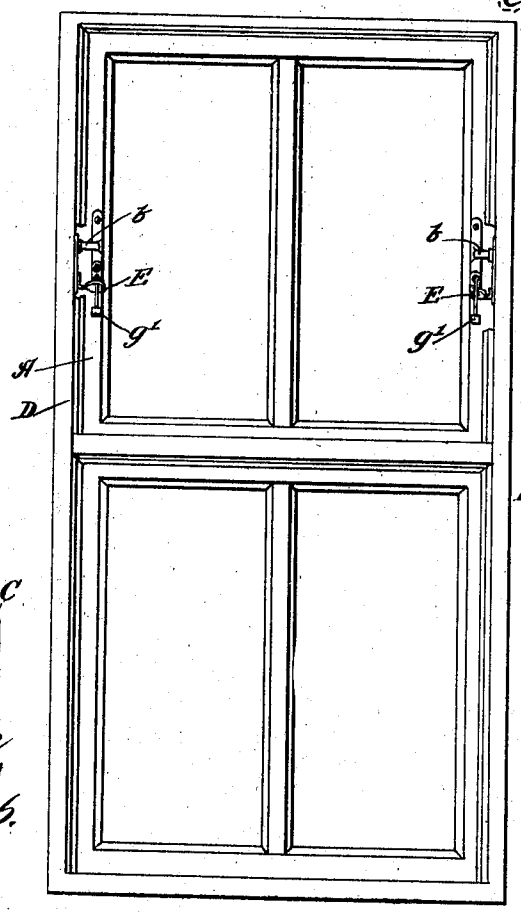
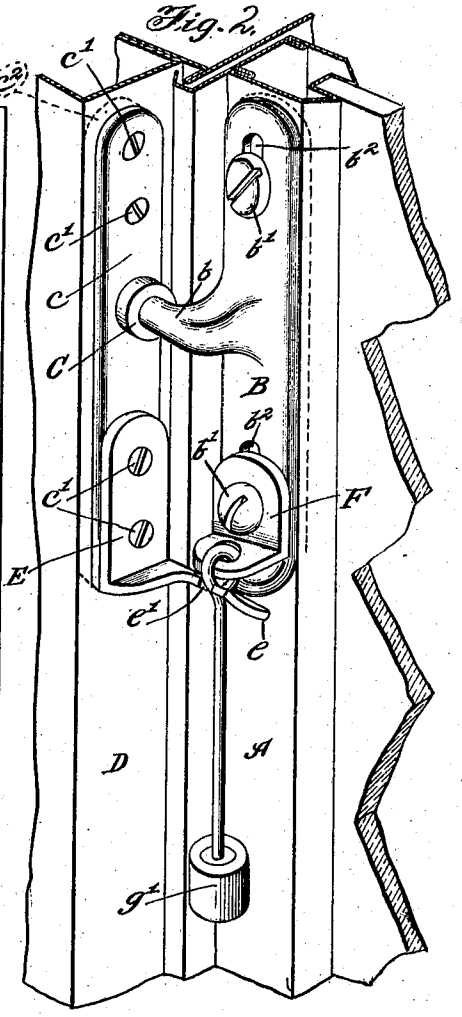


Fig. 2.



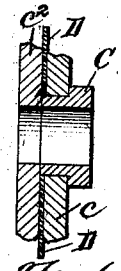


Fig. 6.

Fig. 3.

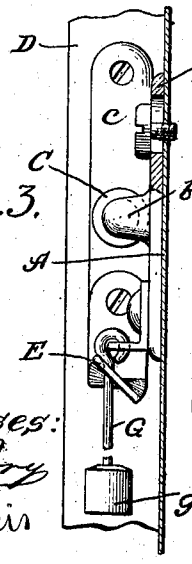


Fig. 5.

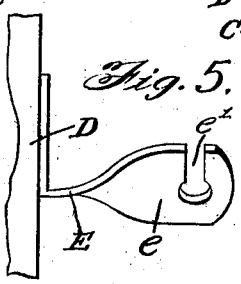
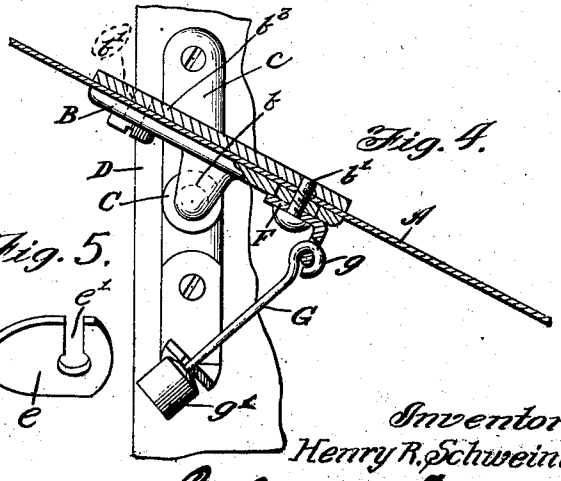


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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WINDOW.

No. 853,902. Specification of Letters Patent. Patented May 14, 1907.

Application filed November 16, 1905. Serial No. 287,571.

To all whom it may concern:

Be it known that I, HENRY R. SCHWEINLER, a citizen of the United States of America, and a resident of New York, N. Y., have invented a certain new and useful Improvement in Windows, of which the following is a specification.

My invention contemplates an improvement on the form of window stop disclosed in application No. 281,885, filed October 9, 1905, by William A. Heartt, for improvement in window stop, and contemplates broadly certain improvements in the mountings or hardware of tilting windows.

Generally stated, the object of my invention is to simplify the construction shown in said prior application, as, for example, by dispensing with the guard for holding the stop-rod in the notch in the stop-bracket; and to provide improved bearings for the tilting self-closing window-sash.

To the foregoing and other useful ends, my invention consists in matters hereinafter set forth and claimed.

In the accompanying drawings: Figure 1 is an inside view of a window having stop-devices embodying the principles of my invention. Fig. 2 is an enlarged perspective of the window-stop, showing the window closed. Fig. 3 is a side elevation of the window-stop and adjacent portion of the window. Fig. 4 is a view similar to Fig. 3, but showing the window open. Fig. 5 is a front view of the stop-bracket. Fig. 6 is an enlarged detail section of one of the brass bushings for the pivots.

The window may be of any suitable known or approved construction.

As shown, the sash A is provided with pivot-plates B having pivots b. These pivots are adapted to engage the sockets C in the socket-plates c on the window jamb D. In this way, the axis of the sash is so disposed that the window tends to close of its own weight. Each socket-plate c is provided with a stop-bracket E having a bearing portion e twisted to an angle, as shown in Fig. 3, and provided with a notch e' in its upper edge. The pivot plates B are provided with small bracket-plates F; and the stop-rods G have eyes g which are swingingly secured to said plates F. These rods are adapted to rest and work in the notches e' of the bracket-plates E, and are each provided with a weight or shoulder g'. When the window is closed, the rods hang down, as shown in Figs. 2 and 3; but when the window is opened, the weights or shoulders g' then limit the motion, as they are too large to pull through the notches e'. At such time the faces of the weights or shoulders engage the outer surfaces of the portions e at points above the rods. In other words, the under surface of each bearing portion e is beveled or inclined to extend upwardly and outwardly; and as a matter of further improvement, the degree of inclination is such that said surface is oblique to the rod when the window is open. In this way, the weights or enlargements g^1 have a constant tendency to slide down instead of up, and the greater the pull on the rods, the more firmly the rods bottom in the notches e'. Thus there is no tendency on the part of the rods to work up and out of the notches. However, when the window is to be washed, the rods can then be swung laterally or lifted out of the notches, and the window can then be swung clear around. In other words, each opening e^1 is adapted to permit the lateral displacement or removal therefrom of the rod allotted thereto, by manually lifting said rod.

Referring to Fig. 4, it will be seen that the pivot-plate B is secured to the sheet-metal sash A by means of screws b', which extend through slots b^2 in the plate B, and through the sheet-metal and into the clamping-plate b^3. It will be understood that this plate b^3 can be secured in any suitable manner, as, for example, by means of rivets, to the inner surface of the sheet-metal sash A, and that it can be provided with threaded sockets adapted to receive the threaded end-portions of the short screws b'. With this arrangement, the pivot-plate, provided with the integral pivot b can be firmly and effectively secured to the sheet-metal sash, and can, by reason of the slots b^2, be adjusted accurately with respect to the socket in which the pivot turns. In a similar manner, the socket-plate c can be secured to the sheet-metal frame D by means of screws c' which extend through the plate C, through the sheet-metal frame D and into a clamping-plate c^2 suitably secured to the inner surface of the sheet metal frame. It will be understood that this clamping-plate c^2 may be secured in any suitable manner to the inner

surface of the sheet-metal frame, and that it can be provided with threaded sockets adapted to receive the clamping or securing screws c'.

As a matter of still further and special improvement, the socket C preferably consists of a bushing set into the plate c in the manner shown more clearly in Fig. 6. This bushing is preferably of brass or some other non-corrosive metal, it being remembered that the pivot b is preferably of cast iron. With this arrangement, the entire pivot and stop attachment of the window can be of cast or wrought iron, or other cheap metal, while the said bushing can be of brass or other suitable non-corrosive metal. With this arrangement, the pivot and its socket will not corrode, and will not have any tendency to endanger the effective closing of the window at any and all times. Thus, with the arrangement shown, the pivot and socket plates are easily and securely attached to a window having a sheet-metal construction, and in addition, the pivotal connections will not have any tendency to corrode and thereby interfere at any time with the proper and easy self closing of the window. Furthermore, with the arrangement shown, the pivot and socket plates have attached to them a swinging weight and a notched stop, whereby the same are easily and conveniently attached to the window sash and frame.

It will be seen that the pivotal bearings of the tilting window are arranged out of line with the self closing sash,—that is to say, at a distance inside of the sash, whereby the weight of the sash tends to return it to its closed or normally vertical position. In other words, the axis upon which the window sash tilts is located at some distance away from the sash, so that its weight tends to keep it in a vertical position.

The stop rod G can hang vertically when the window is closed.

What I claim as my invention is:

1. The combination of a tilting window, pivot bearings providing a horizontal axis for the swinging window sash, a stop-bracket secured to the window jamb, provided with a bearing portion having a notch at its upper edge, disposed just below said axis, and a stop-rod swingingly secured to the window-sash and adapted to rest in said notch, but adapted to hang vertically when the window is closed, the said rod provided with means for engaging the under surface of said bearing portion, the said under surface beveled or inclined to extend upwardly and outwardly, substantially as set forth.

2. The combination of a tilting window, pivot bearings providing a horizontal axis for the swinging window sash, a stop-bracket secured to the window-jamb, provided with a bearing portion having a notch at its upper edge, disposed just below said axis, and a stop-rod swingingly secured to the window sash and provided at its end with an enlargement or shoulder, the rod adapted to rest in said notch, but adapted to hang vertically when the window is closed, the enlargement or shoulder too large to pull through the notch, but the rod adapted to be swung up and out of the notch when it is desired to tilt the window beyond a predetermined point, the said bearing portion provided with an under surface beveled or inclined to extend upwardly and outwardly, substantially as set forth.

3. The combination of a tilting window, pivot bearings providing a horizontal axis for the swinging window sash, a stop-bracket secured to the window-jamb, disposed just below said axis, said bracket having an oblique bearing portion provided at its upper edge with a notch, and a stop-rod swingingly secured to the window sash and adapted to rest in said notch, but adapted to hang vertically when the window is closed, the end of the rod provided with an enlargement or shoulder too large to pull through the notch, but the rod adapted to be swung up and out of the notch when it is desired to tilt the window beyond a predetermined point, said bearing portion having its under surface beveled or inclined to extend upwardly and outwardly, said surface adapted to engage said shoulder or enlargement when the window is open and extending obliquely to the rod to keep the latter bottomed in the notch, substantially as set forth.

4. The combination of a tilting window, sockets secured to the window frame, and laterally projecting pivots secured to the window sash and engaging the said sockets, the horizontal axis about which the window is thus adapted to tilt located some distance inside of the sash, to make the window self-closing, substantially as set forth.

5. The combination of a tilting window, pivot-plates adjustably secured to the window sash, socket-plates secured to the window frame, said pivot plates provided with laterally projecting integral pivots, and the socket-plates having sockets adapted to receive said pivots, said sockets and pivots extending horizontally and parallel with the inner surfaces of the pivot plates, but at right angles to the inner surfaces of the socket plates, substantially as set forth.

6. The combination of a tilting sheet-metal window sash, clamping-plates secured to the inner surface of the sheet-metal window sash, pivot-plates applied to the outer surface of the sheet-metal window sash and provided with slots b^2, clamping screws extending through the slots b^2 in the pivot-plates and screwed into the clamping plates, a sheet-metal window frame, other clamping-plates secured to the inner surface of said

sheet-metal window-frame, socket-plates applied to the outer surface of the sheet-metal window-frame, and screws extending through the said socket-plates and screwed into the said last-mentioned clamping plates, said pivot-plates provided with axially alined laterally projecting horizontal pivots, and said socket-plates provided with similarly alined sockets adapted to receive said pivots, substantially as set forth.

7. The combination of a tilting self-closing window sash, a window frame, cast-iron pivots secured to the sash, iron or steel socket-plates secured to the window frame, and brass bushings secured to the said socket-plates and adapted to receive the said laterally projecting pivots, whereby the said pivotal connections do not tend to corrode and interfere with the self-closing of the window, the horizontal axis of the sash being located outwardly and away from the same, for the purpose set forth.

8. The combination of a tilting self-closing window sash, reinforcing plates secured to the inside of the window sash and provided with tapped holes, pivot-plates applied to the outside of the sash and provided with holes, screws extending through the holes in the pivot-plates and engaging the tapped holes in the reinforcing plates, pivots carried by said pivot-plates, socket-plates applied to the outside of the window frame, other reinforcing plates applied to the inside of the window frame, screws extending through the socket-plates and engaging the said last-mentioned reinforcing plates, and a bushing of non-corrosive metal applied to each socket-plate, said bushings adapted to receive the said pivots, the horizontal axis of the sash being located outwardly and away from the same, for the purpose set forth.

Signed by me at New York this 20th day of October 1905.

HENRY R. SCHWEINLER.

Witnesses:
JOSEPH J. ROBINSON,
PETER C. LENZ.