

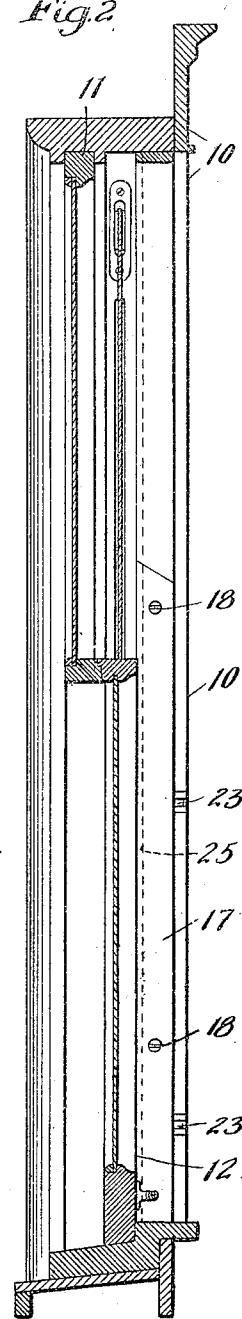
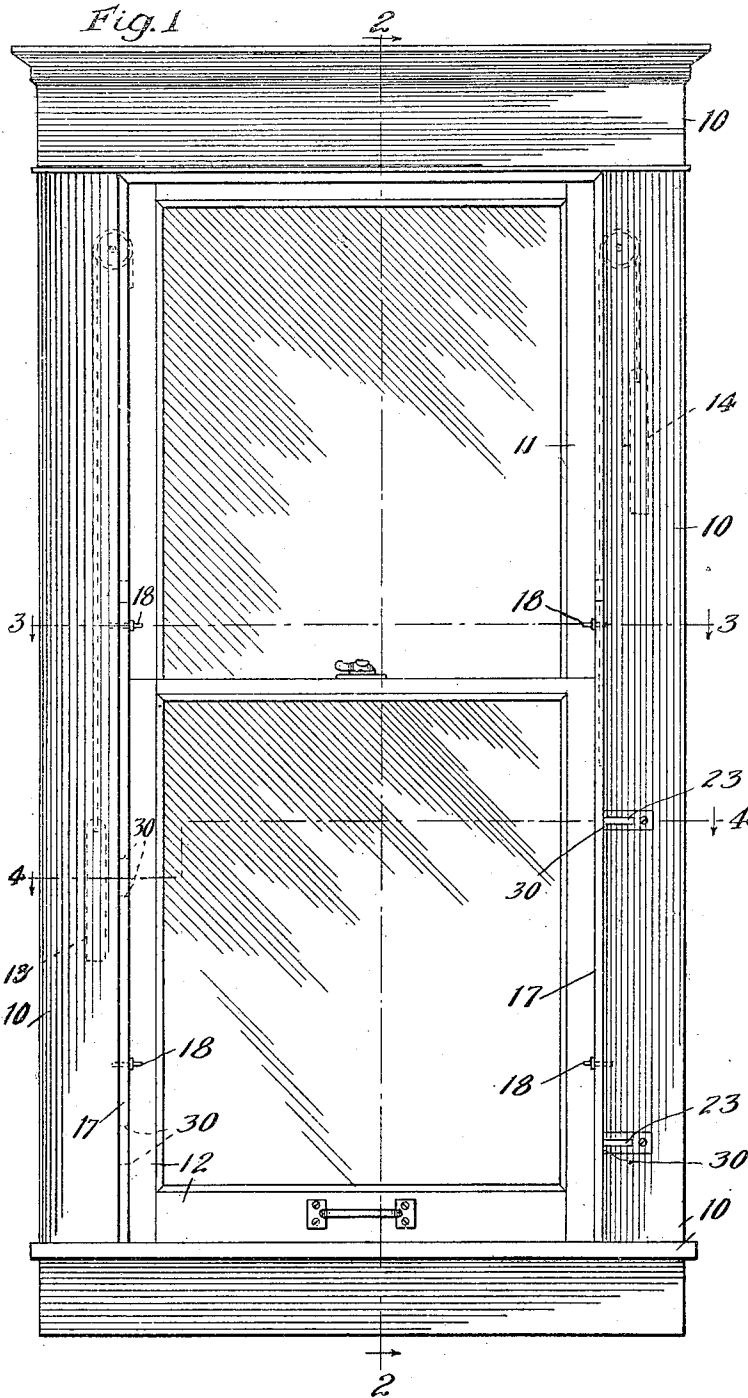
E. P. CARL.
WINDOW.

APPLICATION FILED APR. 8, 1909.

Patented Feb. 22, 1910.

949,973.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

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Fig. 3

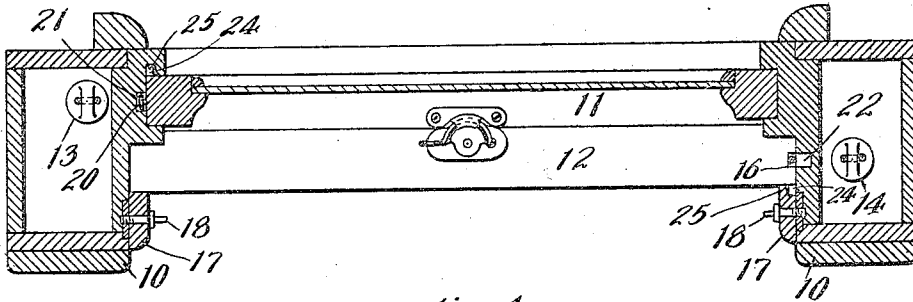


Fig. 4

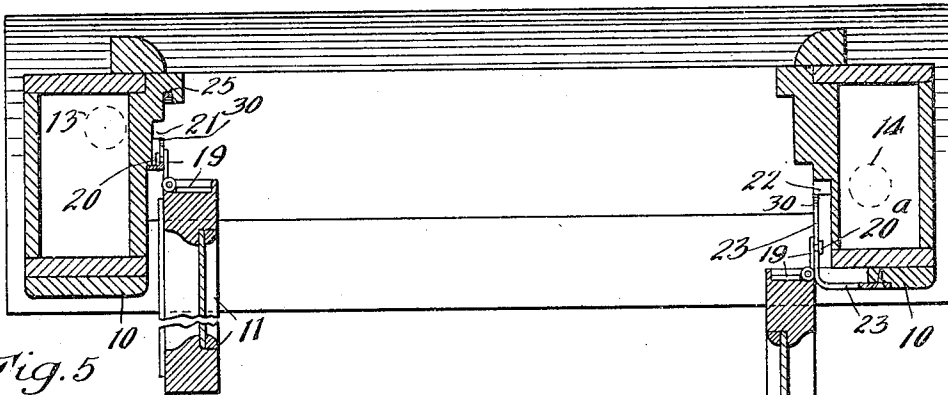


Fig. 5

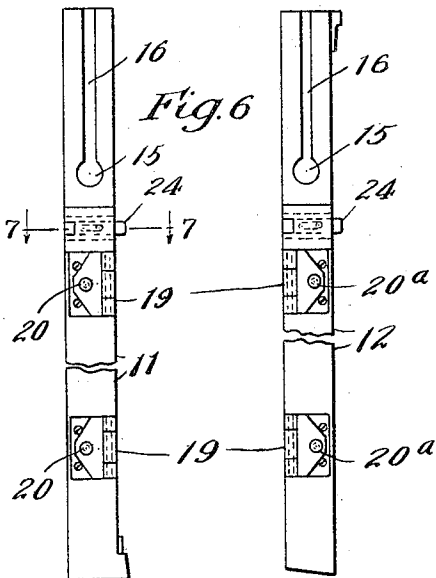


Fig. 6

Fig. 7

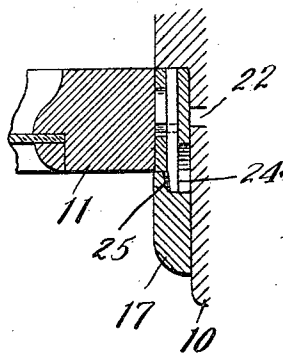
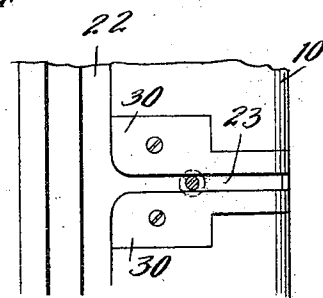


Fig. 8



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UNITED STATES PATENT OFFICE.

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WINDOW.

949,973.

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To all whom it may concern:

Be it known that I, ELISABETH P. CARL, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Windows, of which the following is a specification.

This invention relates to windows for dwellings and other buildings which are adapted both to slide vertically and to swing open when lowered to the bottom of the window. My endeavor in the invention has been to obviate some of the objections which exist to these windows as now made, and also to provide a convenient support for the windows while they are being washed.

The nature of my improvement will be fully described in the subjoining parts of this specification and illustrated in the accompanying drawings, in which latter—

Figure 1 is a front elevation of a window containing my invention and Figs. 2, 3 and 4 are sections on the lines 2—2, 3—3 and 4—4 respectively of Fig. 1. Fig. 5 is an elevation of one edge of the upper sash and Fig. 6 a like view of one edge of the lower sash. Fig. 7 is a section on the line 7—7 of Fig. 5 and Fig. 8 is an enlarged section of the means for supporting the lower sash when swung.

In the drawings, 10 represents the surrounding frame of the window and 11 is the upper sash and 12 the lower sash. Both sashes are supported by weights, the upper sash by the weight 13 and the lower sash by the weight 14. These weights are located as will be noticed, upon opposite sides of the window, but they are adapted to be detached from the sashes, the cords or chains connecting them having enlargements adapted to be inserted in the enlarged ends 15 of the grooves 16 formed in the sash and giving room to the connecting chains or cords. In front of the lower sash are removable stops 17 secured by the screws 18 in such manner as to permit easy and quick removal and replacement. Both sashes are intended to be lowered to the bottom of the window when they are to be washed or swung open.

It will be noticed that I have not shown the outstanding sharp pointed pivots upon which these windows are generally swung and which are an element of danger at all times both to clothing and the person. Instead of such pivots I provide the sashes

with complete hinges 19 which travel up and down with them and provide one member of each hinge, the member which opens, with an outstanding button or hook marked 20 in the case of the upper sash, and 20^a in the case of the lower sash, adapted to enter vertical grooves which are numbered 21 in the case of the upper sash and 22 in the case of the lower sash, formed in the window frame adjacent to the slideway in which the sash moves up and down. The engagement of the button in these grooves is continuous in the case of the upper sash and also in the case of the lower sash with the exception that right angle horizontal grooves 23 connecting with the vertical grooves above mentioned, are provided to allow the lower sash to be moved bodily outward from its normal plane so that it may clear the way for the swinging of the lower sash. All this is explained later on.

Both sashes are provided with normally stationary retainers 24 which at all times, when the windows are in their sliding position are entered in grooves 25 formed in the window frame. These retainers insure the retention of the sashes in their proper planes for vertical movement, when such movement is desired. The hinges referred to are preferably as nearly flat as may be so that they may fold closely together and are preferably of the kind known as leaf hinges, one member of the hinge being screwed flatwise to edge of the sash. When closed the outstanding button 20 will be the only projecting feature and it is adapted to enter the grooves 21 or 22 and with its head engaging the inner wall of the groove in such manner as to prevent withdrawal from the groove. Being thus confined in the groove, the only movement permitted is a vertical one either up or down, so long as the stops 17 are in place but by removing those stops the sashes can both be swung inward as indicated in Fig. 4.

In the case of the lower sash, I provide two right angle grooves 23 connecting with the vertical groove 22. When in the vertical movement of the sash the buttons arrive opposite these grooves, the lower sash can not only be moved bodily outward because of the opportunity such grooves afford the buttons, but also can be turned and swung to a position beyond that indicated in Fig. 4, the groove 23 being extended around upon

the front of the window case. At the entrance to the groove 23 the corners of the metal plates 30, between which the groove is formed, are rounded as seen at Fig. 8 so as to facilitate the entrance of the buttons into the groove. By turning the lower sash to the position of Fig. 4 or somewhat beyond, ample room is gained for the swinging of the upper sash.

10 I claim:—

1. The combination with the window frame and a sash sliding vertically therein, of hinges attached to and moving with the sash, the hinges having outstanding buttons or hooks secured upon swinging leaves, and the window frame having a vertical groove with connecting horizontal grooves in which said hooks or buttons may be confined with freedom to slide.

20 2. The combination with the window frame and a sash sliding vertically therein, of hinges attached flatwise to the edge of the sash and moving with the same, the hinges having outstanding buttons or hooks secured upon the swinging leaves of the hinges, and the window frame having grooves in which said hook or button may

be confined with freedom to slide and permitting the sash to be moved bodily inward from its normal position.

3. The combination with the window frame and upper and lower vertically sliding sashes therein, such sashes having outstanding buttons or hooks mounted on swinging leaves attached to the sashes, and the window frame having grooves in which such buttons or hooks may be slidably confined, and the grooves controlling the lower sash being adapted to permit that sash to be moved bodily inward from its normal position without detaching it.

4. The combination with the window frame and upper and lower vertically sliding sashes therein, both of the sashes being pivoted with hinging devices upon which they may be swung inward from the bottom of the window, such hinging devices of the lower sash permitting that sash to be moved bodily inward from its normal position without detaching it.

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