April 8, 1930. H. HIGGIN 1,754,018

WINDOW SCREEN

Filed June 22, 1925

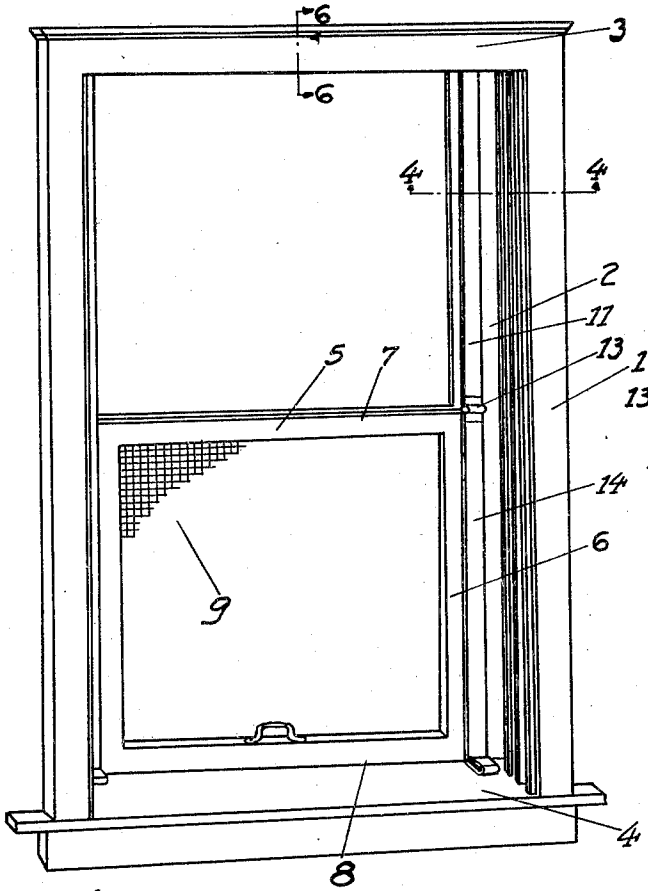


FIG 1

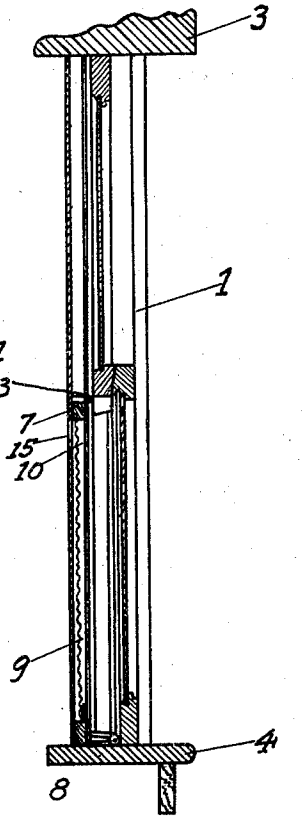


FIG 3

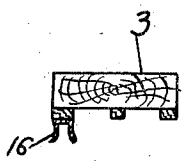


FIG 6

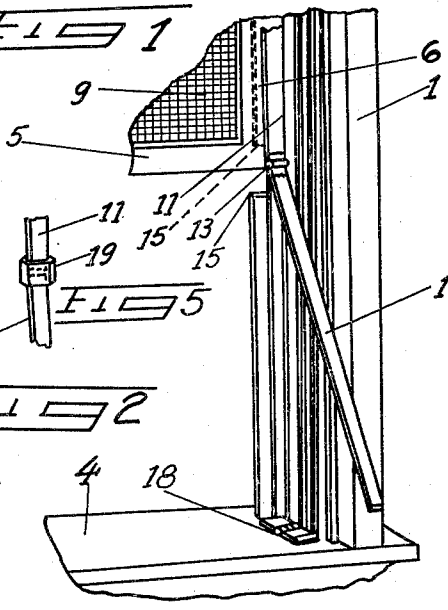


FIG 2

FIG 5

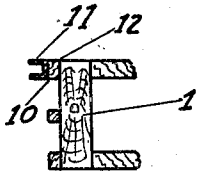


FIG 4

INVENTOR

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BY

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Patented Apr. 8, 1930 1,754,018

UNITED STATES PATENT OFFICE

HENRY HIGGIN, OF NEWPORT, KENTUCKY, ASSIGNOR TO THE HIGGIN MANUFACTURING COMPANY, OF NEWPORT, KENTUCKY, A CORPORATION OF WEST VIRGINIA

WINDOW SCREEN

Application filed June 22, 1925. Serial No. 38,632.

My invention relates to window screens in general and more particularly to window screen guides for screens in which no provision is made for a spring support of the screen within the side guides.

The object of my invention is to provide in a novel construction of side screen guides or channels a hinged portion to the channels which will open towards the inside of the building so that screens may be installed and withdrawn without the necessity of moving the screens on the outer side of the screen guides.

The customary method of supporting screens in a window frame has been to place vertical guides in the stiles on the outside of the window sash beading so that the screens will not interfere with the opening and shutting of the windows. In this type of screen support it is, of course, old to provide channels which are cut away on the upper outer portion so that the screens may be held outside the frame and inserted through the cut away portion into the guides. It is also old to dispose arcuate springs on the outer edges of the screens which may be forced within the channels on one side and which allow the other side of the screen to be moved into position within the channels. With the spring type of screen it is old to provide a solid channel extending throughout the longitudinal exposure of the window frame. With all the above types it is a strain on a woman to insert the screens. It is such a laborious effort to remove the screens that often the outer side of the windows can not be washed. The screens often stick and they are particularly liable to fall out and drop to the ground.

In tall office buildings or the like this tendency of the screens to fall out is a constant source of danger because a screen dropping from an office window and hitting a pedestrian will be liable to seriously injure him. Screens installed in accordance with my invention cannot fall out of a window frame and as there are no springs to stick, the use of the screens can be enjoyed with considerably more comfort.

Referring to the drawing in which I have illustrated a preferred form of screen guide, Figure 1 is a perspective view of a window frame before the sashes have been installed showing the appearance of a window screen retained by my novel guides.

Figure 2 is a perspective view of one of the side guides in open position ready to admit a screen.

Figure 3 is a vertical section of a window frame with the sash in place and a screen inserted in accordance with my invention.

Figure 4 is a horizontal section of the frame taken on line 4—4 of Figure 1.

Figure 5 is a detail showing a substitute for the hinge member.

Figure 6 is a vertical section of the frame taken on the lines 6—6 in Figure 1.

Generally indicated at 1 is a window frame with stiles 2, a cap 3 and sill 4. The screen generally indicated at 5 has side frames 6, a top frame 7 and a bottom frame 8. Held within the supporting frame of the screen is the screening material indicated at 9. The channels for retaining the screen slidably in a vertical direction are composed of back portions 10 and sides 11, 11, and the channel guides are usually fastened to the outside bead 12 with nails or screws and run from top to bottom of the frame, and while I have shown the channel guides for the screen as formed of sheet metal, wooden side strips can be also employed if desired.

In order to permit the screen to be inserted in the guide channel from the inside, the lower portion of the inner side member 14 on each side is hinged as shown at 13 at about the line of the meeting rails of the sash, and this portion swings inwardly as shown in Figure 2. The screen, of course, cannot be installed unless the lower window sash is raised to the open position clearing the hinges and in order to clear the ends of the upper sash which are usually provided with depending bracket pieces, I cut away the back member of the side channel at 15, so that by tipping the screen it may be passed into the guide channels. In order that the screen may be raised and securely held in position opposite the upper sash for top ventilation I extend the channel guides

across the top of the window frame and pinch in the sides as shown at 16, so that they will frictionally hold the screen frame. In order to secure the hinged sides of the channel in position after the screen has been inserted I have provided locks 18 to swing into position against the sides and hold them in position. By freeing the lock members the hinged sides can be swung inwardly to permit the ready insertion of the screen without any liability of the same being accidentally dropped through the opening. Instead of hinges the members 14 may be separate strips and slipped into and out of pockets 19 formed on the adjacent upper side guide, as shown in Figure 5, which construction would be an obvious substitute for the hinge construction as illustrated so that I do not desire to be limited in the claims that follow to any limited meaning of the term hinge.

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

1. In a device for supporting window screens in a window frame, a vertical channel disposed on the stile beyond the line of the window sash, the lower inner side portion of the channel hinged substantially in line with the meeting rails of the window sashes and adapted to be swung out of engaging position with the screen channel guide when said lower window sash is in raised position.

2. In a device for supporting window screens in a window frame, a vertical channel disposed in the stile beyond the lines of the window sash, the lower inner side portion of the channel hinged substantially in line with the meeting rails of the window sashes and adapted to swing out of engaging position with the screen channel guide when said lower window sash is in raised position, and a lock to secure said hinged side guide of the channel in position when said screen is in the channel.

3. A guide for a window screen comprising a back portion and two side portions extending therefrom so as to form a channel, a portion of one of said side portions being free of the back and hinged to the remainder of said side portion so as to swing into and out of channel-forming relationship, and a lock comprising a member extending at an angle from said guide beyond the free end of said hinged portion so as to be cleared thereby, and a second member hinged to the outer end of the first member so as to lie in substantial alignment with it in one position, and in another position to overlie it, the free end of said second member adapted when in the latter position to hold the free end of the hinged portion in channel-forming relationship with said back and the other side member.

HENRY HIGGIN.