April 30, 1935. G. JAEGER 1,999,504

WINDOW COVERING DEVICE

Filed June 9, 1934

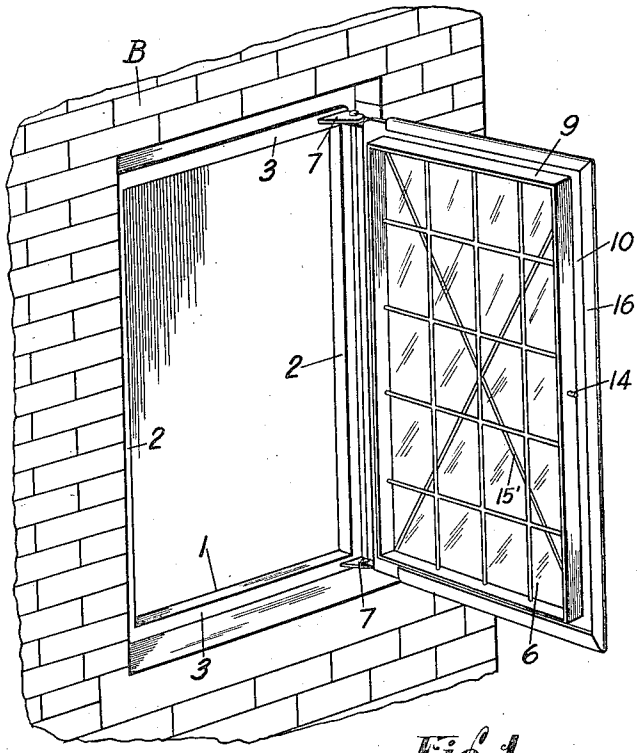


Fig. 1

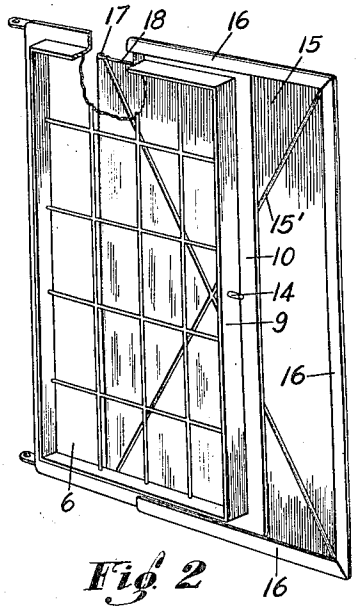


Fig. 2

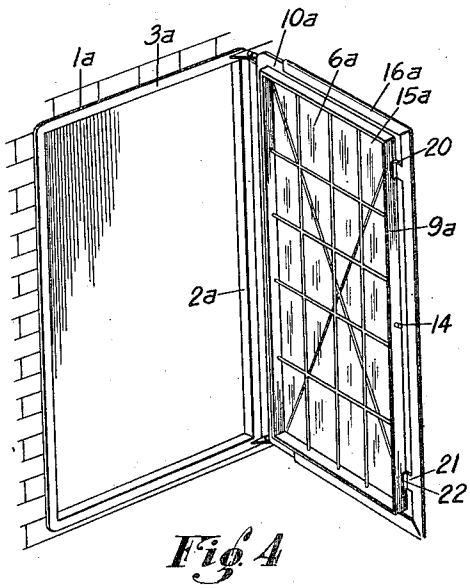


Fig. 4

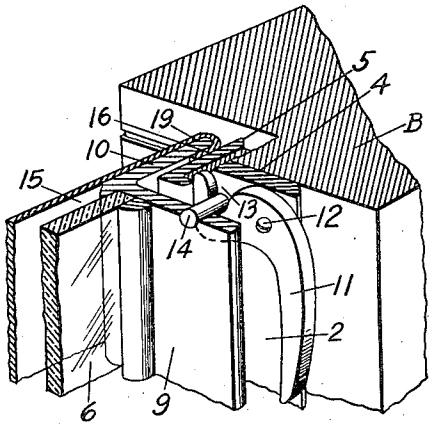


Fig. 3

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WINDOW COVERING DEVICE

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7 Claims. (Cl. 189—79)

My invention relates to a window covering device. It has to do, more particularly, with a device which is adapted to be applied in covering relation to a window of a building to protect the window from breakage and to prevent burglarizing of the building. It is particularly applicable to that type of window embodying a metal window frame and a metal window sash hingedly mounted thereon, although it is not necessarily limited thereto.

In the past, if an owner of a building desired to close up his building and not use it for some time, provided the window did not have shutters, it has been necessary to board up the windows of the building to protect the windows from breakage and the building from burglary. It is difficult to cover the windows with boards and sometimes practically impossible, especially if the building is made of brick or stone and the window frame and sash are made of metal. Further, it is difficult in any case to apply the boards in covering relation to the window, in such a manner as to prevent removal thereof from the outside by burglars or unauthorized persons. Also, when a window is covered with boards it is very unsightly.

One of the objects of my invention is to provide a window covering device which is particularly applicable to windows embodying a metal frame and a metal sash hingedly mounted thereon, this device being of such a type that it may be readily applied to or removed from the window.

Another object of my invention is to provide a window covering device of the type indicated which will fully protect the window when applied thereto and which is of such a type that it cannot be removed from the outside by unauthorized persons.

Another object of my invention is to provide a window covering device of such a nature that it will be pleasing in appearance when applied to the window.

Still another object of my invention is to provide a window covering device which is very simple in structure and can be manufactured at a very low cost.

As previously stated, my invention is particularly applicable to windows embodying a metal frame and a metal sash. The metal window sash is usually hingedly connected to the frame at one edge thereof. This metal window sash has a flange extending entirely around its edge. I contemplate providing a window covering device which may be made of a single piece of sheet metal or the like and which has its edges turned in such a manner that it may be slipped on the window sash and the turned edges will cooperate therewith to keep it in place on the sash.

The preferred embodiment of my invention is shown in the accompanying drawing, wherein similar characters of reference designate corresponding parts and wherein:

Figure 1 is a perspective view of a window having a window frame set back in the wall of a building and having a window sash hingedly connected thereto at one edge, my window covering device being shown as applied in covering relation to the window sash.

Figure 2 is a perspective view, partly broken away, of the window sash of Figure 1 and showing how my window covering device may be easily slipped on the sash into covering relation therewith.

Figure 3 is a detail, partly in perspective and partly in section, showing how the window sash fits into the window frame, even when my covering device is applied thereto and illustrating the type of lock usually employed for locking the sash in closed position.

Figure 4 is a perspective view of a slightly modified form of my window covering device, applied to a window having a window frame which is not set back in the wall of the building.

With reference to the drawing, and particularly to Figures 1 to 3, inclusive, I have illustrated a window covering device made in accordance with the principles of my invention. In Figure 1, I show a portion of the wall B of a building having a window opening formed therein as shown.

Within this opening a window frame 1 is disposed. This window frame is set back in the wall of the building a considerable distance, as illustrated in Figures 1 and 3. The window frame in this instance is made of metal such as steel. It embodies an inwardly extending flange 2 and a laterally extending flange 3 disposed at right angles thereto. The window opening is reduced in size towards the inside of the wall and the flange 2 fits closely against the edge thereof, as indicated at 4 (Figure 3). This also forms a shoulder 5 against which the laterally extending flange 3 will abut.

A window sash 6, the frame of which is also made of steel, is hingedly connected to the window frame 1. Thus, suitable hinges 7 are provided at one edge of the window sash for hingedly connecting it to the corresponding edge of the window frame. The window sash is so mounted

on the window frame that it will swing outwardly as indicated in Figure 1. The window sash has a plurality of window panes of glass mounted therein in a suitable manner.

The main frame of the window sash embodies an inwardly extending flange 9 and a flange 10 which extends laterally at right angles thereto. Both of these flanges extend entirely around the window sash. When the window sash is swung into closed position, the inwardly extending flange 9 of the window sash is adapted to fit within the inwardly extending flange 2 of the window frame, as will be apparent from Figure 3. The flange 10 of the window sash is adapted to rest against the flange 3 of the window frame when the sash is swung into closed position.

In Figure 3 I have illustrated a type of lock which may be used for locking the window sash in closed position. This lock embodies a lever 11 pivoted at 12 to the flange 2 of the window frame. This lever will be disposed between the flange 9 of the sash and the flange 2 of the frame when the sash is swung into closed position. This lever has an open-ended slot 13 formed in its outer end which is wider at its mouth than at the inner end. This slot is adapted to cooperate with a pin 14 mounted on the flange 9 of the sash. This pin is short enough not to prevent closing of the sash. It will be apparent that when the sash is in closed position, the lever 11 may be operated to cause the slot 13 to swing around the pin 14 and the sash 9 will be wedged into position against the frame and will be locked in position. The flange 10 of the window sash and the flange 3 of the window frame will be held in firmly abutting relation. Other types of locks, however, might be used.

In order to protect the glass panes of the window sash from breakage, I provide the covering device 15 which is to be disposed in covering relation to the sash and on the outside thereof. This covering device 15 is preferably made of a single sheet of sheet metal or other suitable material. This sheet may be provided with an X-shaped reenforcing rib 15' or other reenforcement. The upper edge, the lower edge and one of the side edges of this sheet of metal are inwardly turned in overlapping relation to the main portion of the sheet, as indicated at 16 in the drawing. The other side edge of the sheet of metal is curled outwardly, as indicated at 17, and this curled portion may receive a stiffening rod if desired. The upper corner adjacent the edge 17 which is curled is cut away, as indicated at 18, and the lower corresponding corner (not shown) is also similarly cut away. It will be apparent that by turning the three edges of the sheet of metal inwardly, as indicated at 16, a groove 19 is formed (Figure 3) along the three edges of the sheet of metal.

It will be understood that in applying this covering device to the window sash, it is merely necessary to slip it on as indicated in Figure 2. The edge which is outwardly curled at 17 will permit the covering device to be slipped on the sash. In doing this, as shown in Figure 2, the upper and lower inturned edges 16 are first slipped over the upper and lower portions of the flange 10 of the window sash. This flange at the upper end of the sash and the lower end of the sash will readily slip in the groove 19 formed by these inturned portions 16. The curled edge 17 will be directed towards that side of the sash which is hingedly connected to the window frame. The device 15 will then be slipped along the window sash until the inturned portion 16 at the side edge of the sheet of metal will fit over the flange 10 of the window sash along the corresponding side edge thereof. Of course, the window covering device 15 will be of such a width as to completely cover the window sash but when it is finally positioned on the window sash, the curled edge 17 will not extend past the edge of the sash. The cut out portions 18 are provided so that the hinged structures 7 will not interfere with proper positioning of the covering device 15 on the window sash.

It will be apparent that when the window sash is swung into closed position, the inturned edges 16 will be disposed between the flange 10 of the window sash and the flange 3 of the window frame. The sheet metal will be comparatively thin and, since the locking device illustrated in Figure 3 exerts a wedging action, this inturned edge being disposed between flange 10 and flange 3 will not interfere with proper closing and locking of the window.

In order to apply my window covering device to the sash when it is swung into open position, it is merely necessary to slip it on the sash towards that side of the sash which is hingedly connected to the window frame. To remove it when the window sash is open, it is merely necessary to slip it relative to the sash in an opposite direction. However, when the window sash is swung into closed position, it will be impossible to slip the covering device 15 therefrom. This is due to the fact that the window sash when closed, is set back within the wall of the building and it will be impossible to slip the covering device from the sash.

In some instances, it may not be desirable to have the inturned portion 16 which is located at the outer side edge of the sash opposite to the side edge which is hinged to the frame. If such is the case, it may be eliminated and be outwardly curled similar to the other curled edge 17, and have a reenforcing rod therein, if desired. The inturned portion 16 at the upper end and the inturned portion 16 at the lower end will be sufficient to hold the window cover on the sash.

In Figure 4 I have shown a slightly modified form of my window covering device which is to be applied to a window wherein the frame is not set back within the wall. In this instance, the frame 1a has its flange 3a abutting the outer surface of the wall. The sash 6a is identical with that previously described and is hingedly connected to the window frame in an identical manner. Further, the window covering device 15a is practically identical with that previously described.

However, it will be understood that when a window covering device made according to my invention is applied to a window of the type shown in Figure 4, it is possible to slip the covering device from the window sash if some means is not provided for locking it in position on the sash. This is due to the fact that the window frame and sash in this instance are not set back in the wall of the building.

In order to prevent slipping of the covering device from the sash, when applied to a window of this type, I provide the structure illustrated in Figure 4. This merely embodies lugs 20 which are L-shaped and which extend from the inturned edge 16a of the device 15a, which is disposed along that side edge of the sash 6a opposite to the side edge hingedly connected to the window frame. These lugs embody a portion 21 extending parallel to the flange 10a of the window sash and a

portion 22 which extends at right angles thereto along the flange 9a thereof. When the sash 6a is swung into closed position, the portions 22 of the lugs 20 will be disposed between the flange 8a of the sash and the flange 2a of the window frame. Thus, it will be impossible to slip the covering device 15a from the sash 6a when the sash is swung into closed position. This device 15a may be applied to and removed from the sash 6a just as easily as that previously described. Instead of having the narrow lugs 20, a similar L-shaped structure could be provided which extended for substantially the entire height of the window sash. Such a structure would function in an identical manner.

Although I have described my invention as being applied to a window having a single sash hingedly connected to the window frame, it will be apparent that my device can be just as easily applied to a window having a pair of sashes swinging open in opposite directions. Also, it may be applied to other types of windows.

It will be understood from the preceding description that I have provided a window covering device having many desirable features. It may be applied to or removed from the window in a very easy manner. Further, it will adequately protect the window when applied thereto and cannot be removed by an unauthorized person outside of the building. My device is extremely simple in structure and can consequently be manufactured at a comparatively low cost. Furthermore, it will be much more pleasing in appearance than the boards usually employed for protecting a window.

My device is of such a nature that it may be easily fitted on the window and very quickly, from inside the building. Thus, it may be quickly applied in case of approaching storms with little trouble. It will protect the window from breakage caused by flying debris, high wind, et cetera.

Having thus described my invention, what I claim is:

1. In combination with a window embodying a metallic window frame and a metallic window sash hingedly connected to said frame at one edge thereof by hinge members in such a manner that the sash may be swung between open and closed positions, the window sash having a peripheral flange along its upper and lower edges and the side edge opposite to that which is hinged to the frame, a covering device for said window sash, said covering device comprising a sheet of metal having its upper and lower edges inwardly turned and one side edge inwardly turned to form grooves along three edges thereof which are adapted to receive the peripheral flange of the window sash, the covering device being adapted to be slipped over the window sash when it is in open position in such a manner that the peripheral flange at the upper and lower edges of the sash will be received in the grooves formed at the upper and lower edges of the sheet of metal and in such a manner that the peripheral flange at the edge of the sash opposite to that which is hinged will be received in the groove formed at the side edge of the sheet of metal, the edge of the sheet of metal opposite to that side edge which has the groove formed therealong having cut out portions which permit proper positioning of the covering device on the sash without interfering with said hinge members.

2. In combination with a window embodying a metallic window frame and a metallic window sash hingedly connected to said frame at one edge thereof in such a manner that the sash may be swung between open and closed positions, the window sash having a peripheral flange along its upper and lower edges and the side edge opposite to that which is hinged to the frame, a covering device for said window sash, said covering device comprising a sheet of metal having its upper and lower edges inwardly turned and one side edge inwardly turned to form grooves along three edges thereof which are adapted to receive the peripheral flange of the window sash, the covering device being adapted to be slipped over the window sash when it is in open position in such a manner that the peripheral flange at the upper and lower edges of the sash will be received in the grooves formed at the upper and lower edges of the sheet of metal and in such a manner that the peripheral flange at the edge of the sash opposite to that which is hinged will be received in the groove formed at the side edge of the sheet of metal.

3. In combination with a window embodying a window frame and a window sash hingedly connected to said frame at one edge thereof in such a manner that the sash may be swung between open and closed positions, the window sash having a peripheral flange at least along the three edges which are not hinged to the frame, a covering device for said window sash, said covering device comprising a sheet of metal having three edges inwardly turned to form grooves along the three edges thereof which are adapted to receive the peripheral flange of the window sash, the covering device being adapted to be slipped over the window sash when it is in open position in such a manner that the peripheral flange along the three edges of the sash which are not hinged to the frame will be received in the grooves formed along the corresponding three edges of the sheet of metal.

4. In combination with a window embodying a window frame and a window sash hingedly connected to said frame at one edge thereof in such a manner that the sash may be swung between open and closed positions, a covering device for said window sash, said covering device comprising a sheet of metal having three edges inwardly turned to form grooves along the three edges thereof which are adapted to receive the edges of the window sash, the covering device being adapted to be slipped over the window sash when it is in open position in such a manner that the three edges of the sash which are not hinged to the frame will be received in the grooves formed along the corresponding three edges of the sheet of metal.

5. In combination with a window embodying a window frame and a window sash hingedly connected to said frame at one edge thereof in such a manner that the sash may be swung between open and closed positions, a covering device for said window sash, said covering device having members along three edges thereof which are adapted to be slipped over the three edges of the window sash which are not hinged to the frame when the sash is in open position in order to retain the covering device in position on the sash.

6. In combination with a window embodying a frame and a window sash, a covering device for said window sash, said covering device comprising a sheet of metal which has inturned portions along its edge to form grooves, the covering device being adapted to be slipped over the window sash when it is in open position in such a manner

that the edges of the sash will be received in the grooves formed along the edge of the metallic member in order to retain the covering device in position on the sash.

7. In combination with a window embodying a frame and a window sash movable between open and closed positions, a covering device for said window sash, said covering device having members along its edge which will fit over the edge of the window sash in such a manner that when the window sash is in closed position it will be impossible to remove the covering device from the sash.

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