Feb. 21, 1928.

1,659,955

F. E. LOESCHER

CASEMENT WINDOW SCREEN

Filed Dec. 10, 1926

2 Sheets-Sheet 1

Fig. 1.

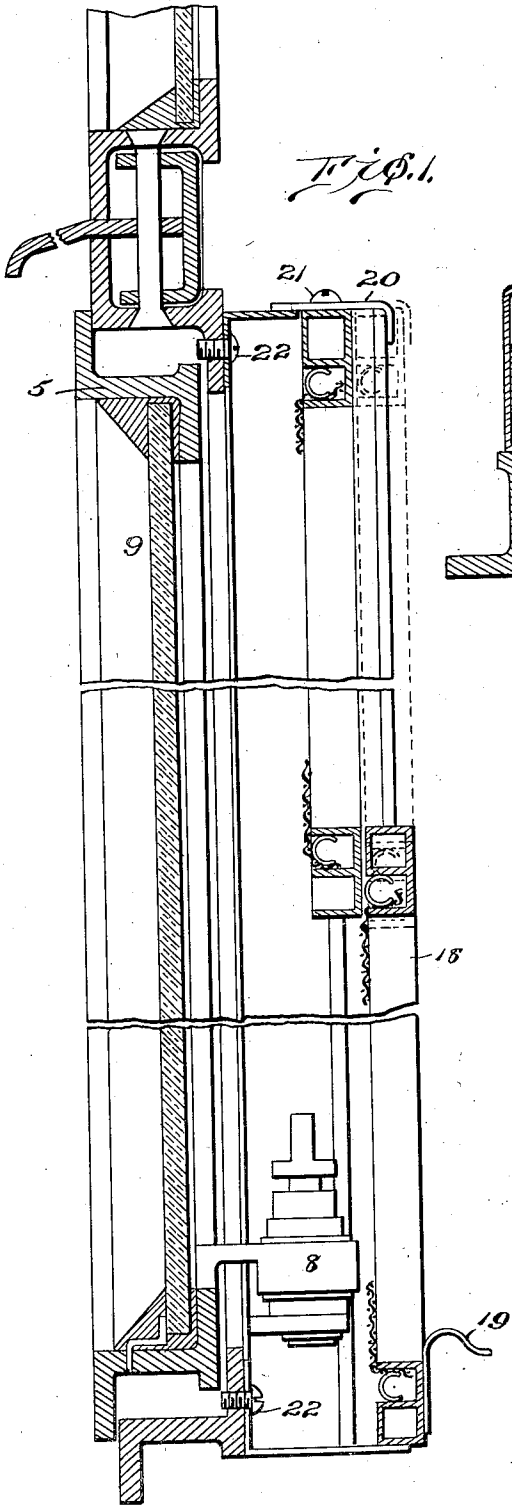

Fig. 2.

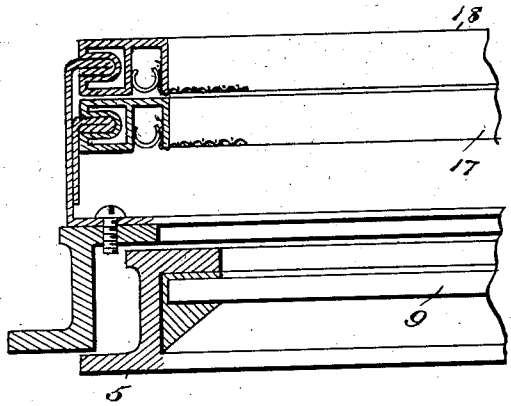

Fig. 3.

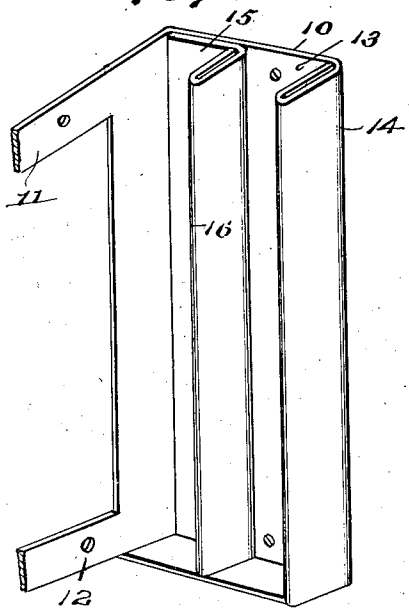

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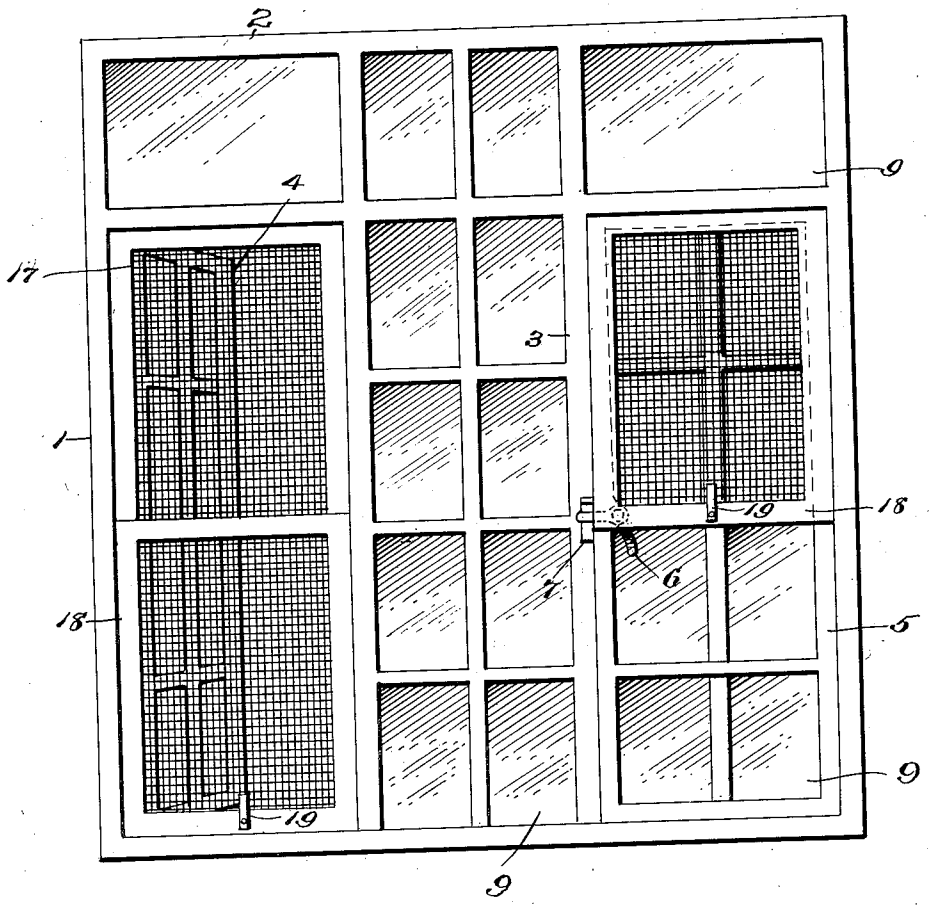
Fig. 4.



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UNITED STATES PATENT OFFICE.

FREDERICK E. LOESCHER, OF HARRISBURG, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO CLAYTON J. LAPPLEY, OF HARRISBURG, PENNSYLVANIA, AND ONE-THIRD TO RAYMOND C. BOBB, OF CARLISLE, PENNSYLVANIA.

CASEMENT-WINDOW SCREEN.

Application filed December 10, 1926. Serial No. 153,834.

Broadly this invention relates to screens but it more especially comprehends the form adaptable in connection with windows of the casement type.

An important object of this invention is the provision of means for screening casement windows, whereby the screen is positioned immediately adjacent the casement frame.

Another object of this invention is the provision of a screening unit including a frame having one or more screen sections slidably mounted therein, the said unit adapted to be mounted contiguous to the casement frame.

A further important object of this invention is the provision of means of the above character for mounting the screen directly adjacent the casement windows, designed to eliminate interference with the projecting hardware by utilizing the casement fastener or operating handle as a seat to maintain the movable screen securely in raised or elevated position when the casement windows are closed, but permitting its return to lowered or operative position when the windows are opened.

A still further object of this invention is the provision of means for screening casement windows adaptable for mounting against the casement frame, thereby eliminating the necessity of screening any except the actual operating casement sashes.

With these and other objects in view, which will become apparent as the description proceeds, the invention resides in the construction, combination and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which like characters of reference indicate like parts throughout the several figures, of which:

Fig. 1 is a vertical sectional view of the casement window and screen structure showing the lower screen section in operative position;

Fig. 2 is a fragmentary horizontal or cross section of window and screens with lower screen in raised position;

Fig. 3 is a fragmentary view of the screen frame showing the screen tracks at one side in elevation; and

Fig. 4 is a front elevation of one type of casement window, showing one of the operating sashes open and movable screen section in lowered or operative position, and the other sash closed with the screen section in raised or elevated position and seating on the sash operating handle.

Heretofore, the screening of casement windows has been attended with considerable difficulty, undue expense and labor, and unsightly appearance, due to the fact, that what is known to the trade as "window hardware" or operating and locking mechanisms projecting inwardly from the windows, rendered it possible to screen such windows, if at all, only by mounting the screens spaced some distance therefrom. This necessitated the attachment of strips to the sill faces or jambs interiorly of the room thereby marring the woodwork and necessitating the use of a screen larger in area than the casement opening, and it was to overcome such deficiencies by providing a means for screening casement windows, whereby the anchoring strips would be eliminated, the amount of screening material substantially reduced, and necessitating the screening only of the actually operating casement sash sections, that I designed the screening device forming the subject matter of this invention.

In the illustrated embodiment characterizing this invention there is shown a casement window or frame designated generally by the numeral 1, and in the present instance comprising an integral top section 2 and vertical central section 3, operating hinged sections or sashes 4 and 5, respectively, each of which carries an operating handle 6 adapted to cooperate with a wedge plate 7 mounted on the section 3 to effect locking of the hinged sections when in closed position, and an adjustable means 8 suitably secured to each of the movable sashes and to the casement frame to lock said sashes in any desired open position. The sections 2, 3, 4, and 5, are formed with glass panels 9 of well known construction.

A square or rectangular metal frame 10 corresponding substantially to the size of the hinged sections 4 and 5, or the opening to be screened, is formed with top and bottom transverse members 11 and 12, respectively, and extending outwardly at right angles from the ends of said members 11 and 12 are the vertical side members 13, the outer or free edges of which are adapted to be

folded back upon themselves to form vertically extending ribs or tracks 14 for a purpose which will presently more fully appear. Welded or otherwise suitably secured to the inner surfaces of members 13 are the metal strips 15 having their free edges folded back upon themselves, similar to the sides 13, to form tracks 16 extending parallel with and slightly spaced from the tracks 14.

A screen section 17 normally screening the upper portion of frame 10 is slidably mounted on the tracks 16, and a corresponding screen section 18 is similarly mounted on the tracks 14 and normally adapted when operatively positioned to screen the lower portion of said frame 10. In order to conveniently raise and lower the slidable section 18 one or more handles 19 are suitably secured to the bottom thereof. Suitably secured to the top of frame 10, as at 20, is a slotted slidable hook or grip member 21, which when in extended position is adapted to hold or maintain the lower screen section 18 in raised or elevated position while the casement sash is open, when it is so desired.

It will be noted that the screening unit comprising the frame 10 and screen sections 17 and 18 mounted therein is adapted to be placed over the opening to be screened and secured to the casement frame 1 by bolts or screws 22, thereby effecting a unitary structure of casement and screen. Thus it is evident, that to install the screens it is only necessary to position the frame 10 against the casement frame 1 and insert the screws 22. To remove the screening unit the said screws are merely withdrawn, and when reinserted in the frame 1 the pleasing appearance of the interior surface of the casement is preserved, without leaving unsightly evidence of the removal of the screens as has been prevalent in connection with the manner of screening casement windows heretofore in use.

Also manipulation of the movable screen section incident to each operation of opening and closing the casement window section or sash is greatly reduced by the employment of my device, since, as illustrated in Fig. 4 of the drawings, when it is desired to open, for instance, the sash 5, it is only necessary to actuate the handle 6, push open the sash and allow the screen section 18 to drop to operative position, as shown in Fig. 4 when sash 4 is open. To close the casement, the screen section is raised by the handle or lift 19, the sash brought to closed position, and the handle 6 again moved to locked position, whereupon the screen section remains in such elevated position by seating on said member or handle 6, as in the first instance.

From the foregoing it is apparent that I have not only effected the expeditious screening of casement windows, by providing a structure of simplified construction, economical of manufacture, and susceptible of expeditious installation without in any manner marring the normal appearance of the interior finish of the window or jambs, but I have overcome the heretofore baffling interference of the casement sash operating and locking means or handle with the screen, while at the same time utilizing said handle as a seat for coaction with the screen to reduce the operations and labor incident to the opening and closing of the casement sashes when screens are employed in connection therewith.

Although in practice, I have found that the form of my invention illustrated in the accompanying drawings and referred to in the above description as the preferred embodiment is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of my device will necessarily vary, I desire to emphasize that various minor changes in details of construction, proportion and arrangement of parts, may be resorted to within the scope of the appended claims without departing from or sacrificing any of the principles of this invention.

Having thus described my invention, what I desire protected by Letters Patent is as set forth in the following claims:

1. The combination with a casement window, of a frame conforming to the contour of the casement window sills, means to affix the frame at its opposite ends to the sills, a pair of screens slidably mounted in the frame and adapted when extended to completely screen the casement opening.

2. The combination with a casement window including its window sections or sashes, of a pair of longitudinally adjustable screen members, and means for associating said members with the window casement so as to permit operation of its window sections.

3. The combination with a window casement, its hinged window section including a latch or operating handle, of a frame including a pair of slidably movable screens, said screens when in extended position completely screening the frame, one of said screens adapted when in raised position to seat upon the latch handle of the window section.

4. The combination with a window casement, its hinged window sash including an operating handle, of a frame embodying parallel side and top members, means for securing the frame immediately adjacent the casement, a pair of parallelly movable screens slidably connected with the side members and when in extended position completely screening the frame, one of said screens when in raised position adapted to seat upon the latch handle of the window.

5. The combination with a window casement, its hinged sash and sash operating handle, of a frame including a pair of slidably movable screens, said frame being secured to the casement, the screens when in extended position completely screening the frame, one of said screens being maintained in elevated position by the sash operating handle when said sash is in closed position.

6. The combination with a window casement, its hinged window sashes including sash operating handles, of a frame secured to the casement embodying parallel side and top members, a pair parallelly movable screens slidably connected with the side members and when in extended position completely screening the frame, one of said screens adapted to seat on the operating handles when the sashes are in closed position, and to return to lowered position when the sashes are open.

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