No. 788,869. PATENTED MAY 2, 1905.

C. C. WHEELER.

WINDOW SCREEN.

APPLICATION FILED SEPT. 27, 1904.

Fig. 1.

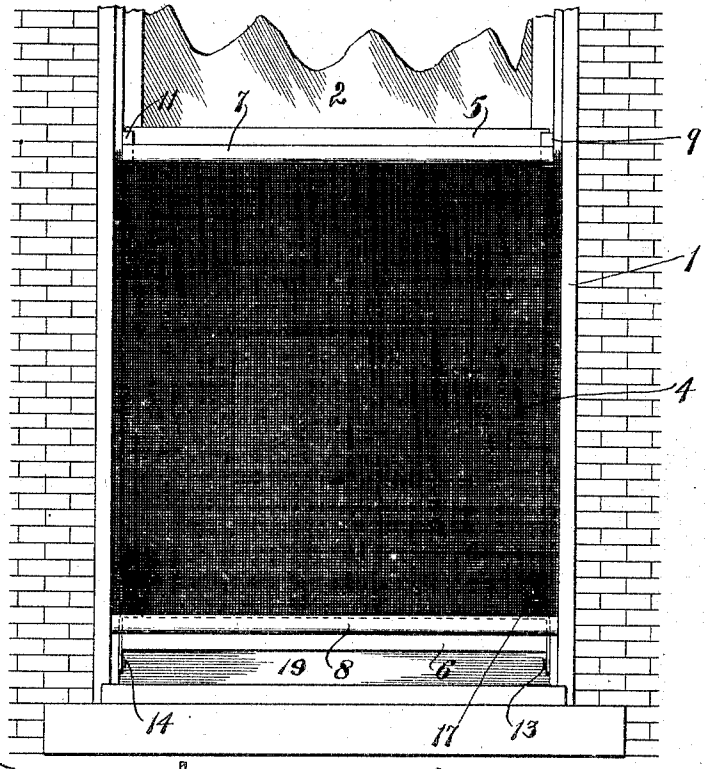


Fig. 2

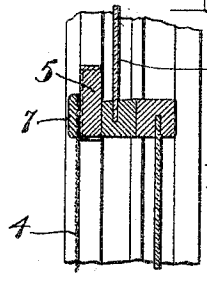


Fig. 3.

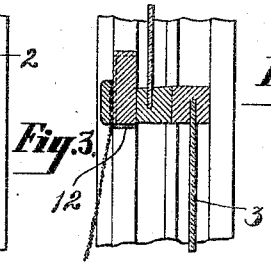


Fig. 4.

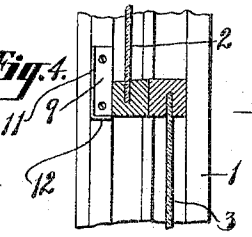
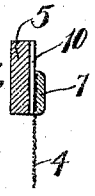


Fig. 5.



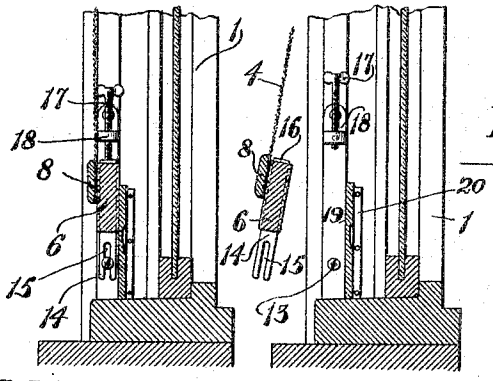
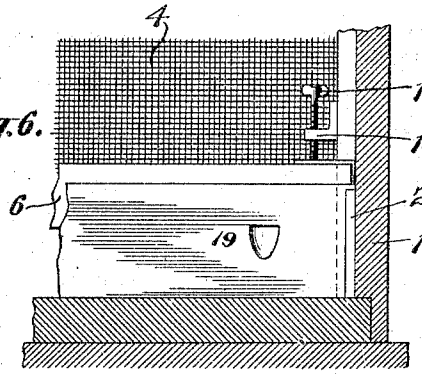


Fig. 6.



Witnesses:

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Inventor:

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by attorneys

Brownell & Howard

No. 788,869. Patented May 2, 1905.

UNITED STATES PATENT OFFICE.

CHARLES C. WHEELER, OF HOLLAND, MICHIGAN.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 788,869, dated May 2, 1905.

Application filed September 27, 1904. Serial No. 226,106.

To all whom it may concern:

Be it known that I, CHARLES C. WHEELER, a citizen of the United States, and a resident of Holland, in the county of Ottawa and State of Michigan, have invented new and useful Improvements in Window-Screens, of which the following is a specification.

One object of this present invention is to provide certain improvements in window-screens whereby the screen may be readily placed into or removed from its position in the window.

Another object is to provide certain improvements in the construction, form, and arrangement of the several parts of the device whereby improved results may be obtained in this class of articles.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents a front view of my improved screen in use. Fig. 2 is a detail vertical section through a portion of a window and my improved screen with the screen in position for use. Fig. 3 is a similar view with the lower portion of the screen released and swung out of its position. Fig. 4 is a detail vertical section showing the socket for receiving the upper cross-bar of the screen adjacent to the meeting-rails of the upper and lower sash. Fig. 5 is a detail section of the upper cross-bar of the screen, showing the vertical groove therein for receiving the retaining-flange of its holding-socket; and Fig. 6 is a transverse vertical section through a portion of a window, showing the right-hand lower corner of my improved screen in position.

The window-casing is denoted as a whole by 1 and its upper and lower sashes by 2 and 3, respectively.

My improved screen comprises the cloth 4, which is preferably wire-cloth, the upper cross-bar 5, and the lower cross-bar 6. The top of the cloth 4 is permanently secured to the upper cross-bar 5 by a fastening-strip 7. The bottom of the cloth 4 is permanently secured to the lower cross-bar 6 by a fastening-strip 8.

Socket-pieces 9 are secured at any desired position along the inner sides of the window-casing 1 for receiving and removably holding the upper cross-bars 5 of the screen in position on the casing. In the present instance these socket-pieces 9 are secured adjacent to the bottom rail of the upper window-sash.

The upper cross-bar 5 of the screen is provided at its ends with vertical grooves 10 for receiving the retaining-flanges 11 of the socket-pieces 9.

A bottom flange 12 is provided on each socket-piece 9, upon which the end of the upper cross-bar of the screen rests for holding the upper cross-bar in position. The said upper cross-bar may be removed from its engagement with the socket-pieces by an upward sliding movement.

The lower cross-bar 6 of the screen has a removable sliding engagement with the sides of the window-casing adjacent to the sill, which engagement may be accomplished as follows: Guide-pins 13 are secured to the inner sides of the casing opposite to each other, and the ends of the lower cross-bar 6 are provided with guide-plates 14, having elongated recesses 15 arranged to receive the said pins 13.

The plates may be removed from engagement with the pins by a sufficient upward sliding movement of the lower cross-bar 6 of the screen. These plates 14 are preferably provided with branches 16, extending along the top of the lower cross-bar 6 a short distance to form bearing-plates for the adjusting-screws, to be immediately hereinafter described.

Adjusting-screws 17 are mounted in suitable brackets 18, secured to the inner sides of the window-casing a short distance above the guide-pins 13. These adjusting-screws 17 are arranged to engage the bearing-plates 16 on the top of the lower cross-bar 6 of the screen when the screen is in position for use, so that as the adjusting-screws are turned in one direction the cloth 4 will be tightened sufficiently to bring the sides of the cloth snugly against the inner sides of the window-casing between the upper and lower cross-bars.

The space between the lower cross-bar of the screen and the window-sill is opened and closed by a base-board 19, which is fitted to slide vertically in suitable guides 20 on the sides of the window-casing.

When it is desired to remove the screen, the adjusting-screws may be unscrewed a sufficient distance to permit the disengagement of the lower cross-bar, after which the upper cross-bar may be removed from its holding-sockets.

It is to be understood that the position of the screen and its size are immaterial.

In the present instance I have shown the screen as arranged to protect the lower half only of a window; but a greater or lesser part of the window may be inclosed by the screen, as found desirable.

It is obvious that various devices may be employed for removably retaining the upper and lower cross-bars of the screen and for tightening the screen other than those herein shown and described. Hence I do not wish to limit myself strictly to the structure herein shown; but

What I claim is—

1. The combination with a window-casing, of a screen comprising upper and lower cross-bars and a cloth connecting the same, the said upper cross-bar being removably fixed in position on the window-casing and the said lower cross-bar having a removable vertically-sliding connection with the sides of the casing adjacent to the window-sill but spaced therefrom and means for forcing the lower cross-bar downwardly toward the sill to tighten the cloth and to lock the screen against removal from the window-casing.

2. The combination with a window-casing, of a screen comprising upper and lower cross-bars and a cloth connecting the same, the said upper cross-bar being removably fixed in position on the window-casing, and the said lower cross-bar having a pin-and-slot connection with the casing for permitting the lower cross-bar to have a sliding movement a short distance above the window-sill and means supported by the casing in position to force the lower cross-bar downwardly toward the sill to tighten the cloth and to lock the screen in position on the casing.

3. The combination with a window-casing, of a screen comprising upper and lower cross-bars and a cloth connecting them, the said upper cross-bar being removably fixed in position on the window-casing, the said casing having guide-pins a short distance above the sill and the said lower cross-bar having guide-plates provided with elongated slots for receiving said guide-pins, and adjusting-screws supported by the casing in position to force the lower cross-bar toward the sill for tightening the cloth and locking the screen in position, the said guide-plates on the lower cross-bar having branches which form bearings for the ends of the said screws.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 24th day of September, 1904.

CHARLES C. WHEELER.

Witnesses:

GEO. E. KOLLEN,

MAUDE WILLIAMS.