

J. H. CHAMBERLIN.

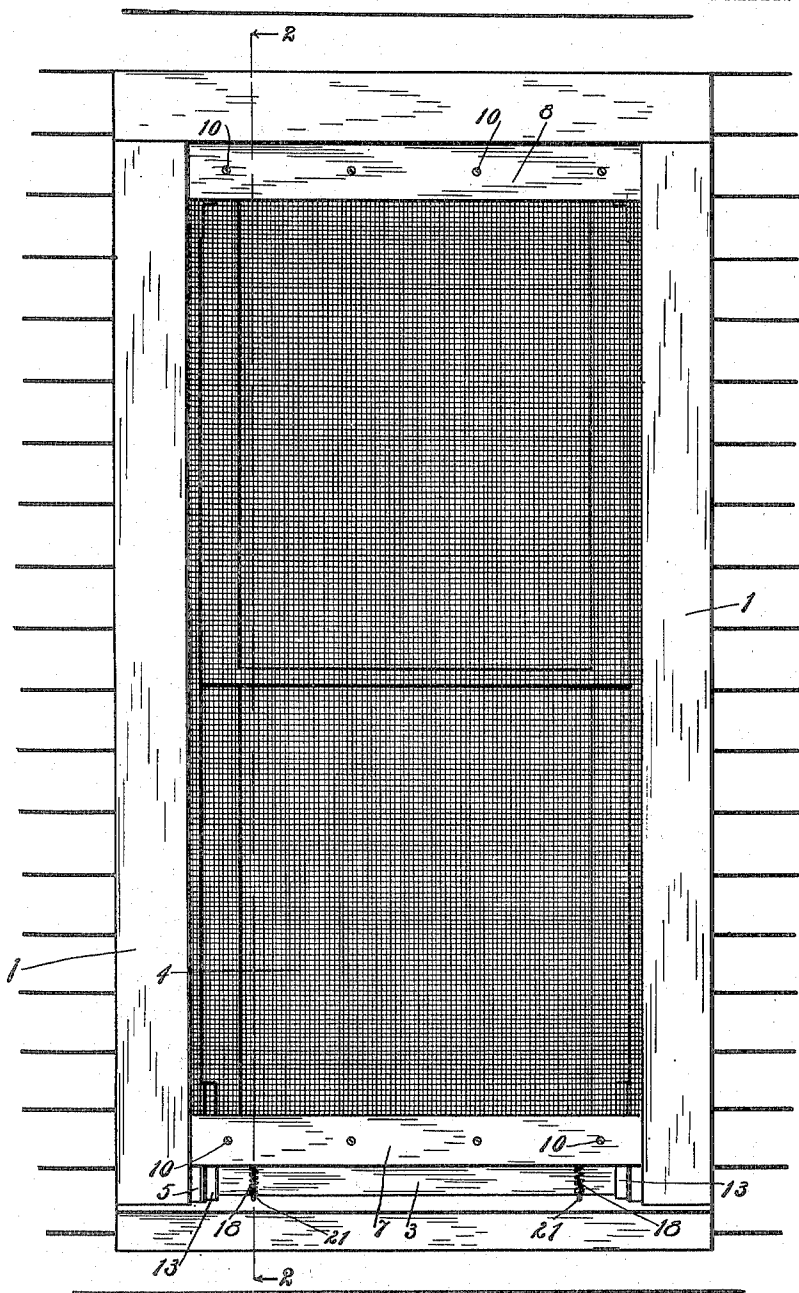
WINDOW SCREEN.

APPLICATION FILED APR. 17, 1909.

950,746.

Patented Mar. 1, 1910.

2 SHEETS—SHEET 1.



Inventor

Witnesses

Gertrude Tallman
Clara E. Braden

Fig. 1.

364

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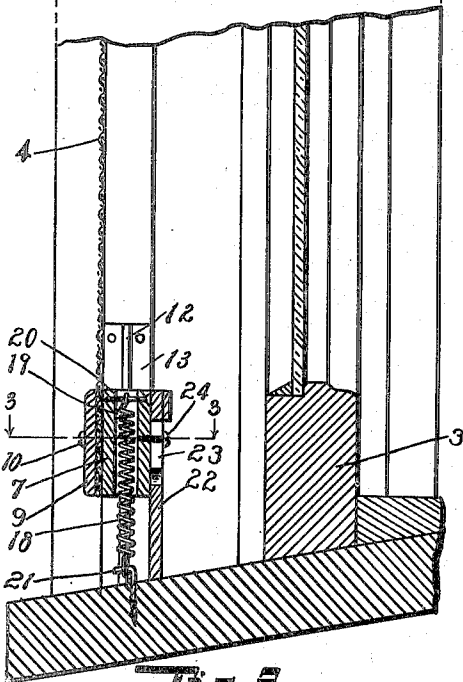
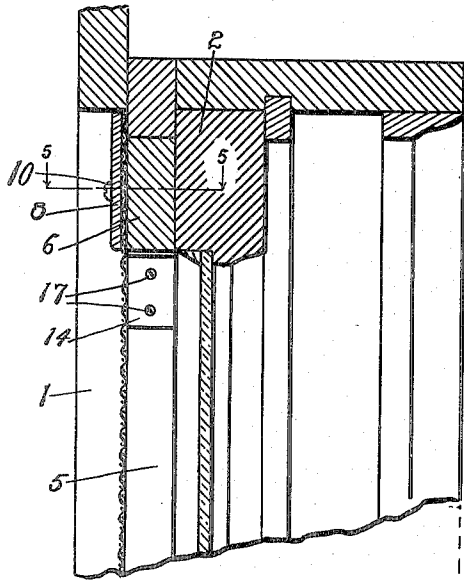
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2 SHEETS—SHEET 2.

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Fig. 2.

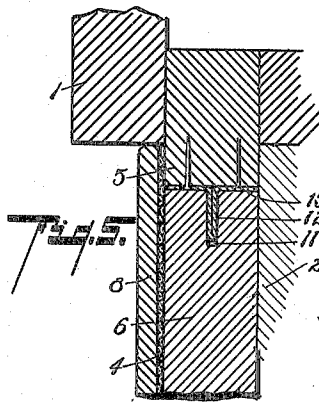


Fig. 3.

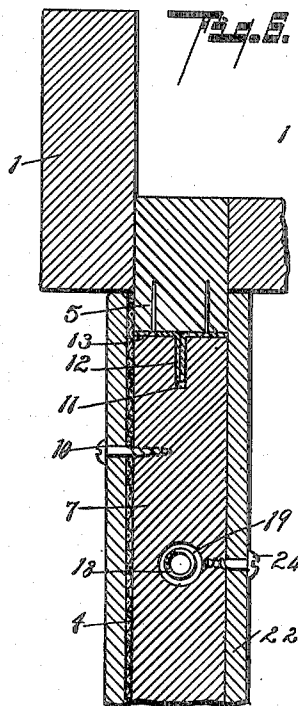


Fig. 4.

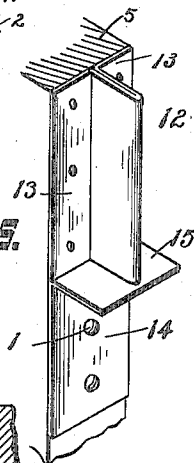


Fig. 5.

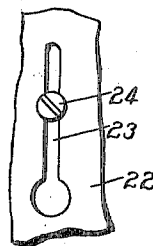


Fig. 6.

Inventor

By

John H. Chamberlin
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UNITED STATES PATENT OFFICE.

JOHN H. CHAMBERLIN, OF KALAMAZOO, MICHIGAN.

WINDOW-SCREEN.

950,746.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed April 17, 1909. Serial No. 490,540.

To all whom it may concern:

Be it known that I, JOHN H. CHAMBERLIN, a citizen of the United States, residing at the city of Kalamazoo, county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

This invention relates to improvements in window screens.

The main objects of this invention are; first, to provide an improved window screen in which the screen is effectively supported without providing a full frame therefor. Second, to provide an improved screen which may be very quickly applied to or removed from the window. Third, to provide an improved screen possessing the above advantages in which the supporting means are so arranged as not to obstruct the window. Fourth, to provide an improved window screen which is readily adjusted to windows of varying dimensions.

Further objects, and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which:

Figure 1 is an elevation of a window having my improved screen applied thereto. Fig. 2 is a detail vertical section taken on a line corresponding to line 2—2 of Fig. 1. Fig. 3 is a detail horizontal section taken on a line corresponding to line 3—3 of Figs. 1 and 2. Fig. 4 is a detail elevation, showing the means for securing the closure strip 22 to the bottom bar 7 of the screen. Fig. 5 is an enlarged detail section taken on a line corresponding to line 5—5 of Fig. 2. Fig. 6 is a detail perspective of the attaching means for one end of the upper screen bar.

In the drawing, similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, 1 represents a window casing of the common construction, having upper and lower sashes 2 and 3, re-

spectively, arranged therein. The screen 4 is adapted to cover the entire window,—that is, both the upper and lower sashes thereof, it being of substantially the width of the window casing so that it overlaps the outer window stops 5 at each side and extends from the top nearly to the bottom.

Cross-pieces or bars 6 and 7 are provided for the top and bottom of the screen, the bar 6 being the top bar and the bar 7 the bottom bar. The screen is preferably secured to these bars by means of the clamping strips 8 and 9, and the securing screws 10, which clasp the strips upon the screen. The ends of the bars 6 and 7 are provided with vertical slots 11 to receive the flanges 12 on the supporting members 13. These supporting members are secured upon the inner edges of the outer window stops, the flanges being arranged, as stated, to engage the slots 11 in the screen bars. The bars are preferably the same width as the window stops 5 to permit the window sash being raised or lowered, as may be desired. The upper screen bar is secured upon its supporting members 13 preferably by means of the retaining plates or members 14, having flanges 15 at their upper edges which project under the bar so that in attaching the bars are slipped on to the flanges and retained thereon by means of the retaining plates or members 14, the plates being provided with perforations to receive the attaching screws, as 17, see Fig. 2. The lower bar 7 is preferably retained and tension applied to the screen for holding it taut by means of the spring 18 which, is the preferred construction as illustrated, are arranged through the vertical holes 19 in the bars to engage the pins 20, their lower ends being secured to the sill by means of suitable hooks, as 21. The lower bar is thus effectively secured and tension applied to the screen for holding it in place, and also by this yielding connection, the screens are adapted to windows of varying sizes. That is, it is found, in practice, that window casings which are intended to be of the same dimensions often vary considerably in the same building, and by this yielding attachment for the lower screen bar, no variations of the dimensions of the screen are necessary for the different windows. The closure strip 22 is adjustably secured to the lower bar, preferably by providing the strip with vertical slots 23 to receive the attaching

screws 24. These slots are, in the structure illustrated, key hole slots so that the strips can be applied or removed from the bars without removing the screws. These screws have the further advantage of being adapted to hold the closure strip 22 adjustably in an elevated position to leave a small opening beneath for drainage or for cleaning.

My improved screen is very economical to produce, and is, as stated, very quickly and easily applied. Further, its supports do not obstruct the window, they being quite unnoticeable from the inside of the window, particularly when the window is closed, and further, the screens are quickly attached or detached.

I have illustrated and described my improved screen in detail in the form preferred by me although I am aware that it is capable of considerable modification or variation without departing from my invention, but as these modifications will be readily understood by those skilled in the art to which this invention relates, I have not attempted to illustrate or describe the same herein.

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

1. The combination with a window casing, of a screen; cross-bars secured at the top and bottom thereof, said cross-bars being arranged on the inside of said screen and having vertical slots in their ends; supporting members having inwardly-projecting flanges adapted to engage the slots in said cross-bars; retaining members having inwardly-projecting flanges at their upper edges arranged below the upper cross-bar for retaining it on said supporting members; springs for securing the lower cross bar to the window sill, said springs being arranged in vertical holes provided therefor in the bottom cross-bar; a closure strip having vertical slots therein arranged on the inside of the bottom cross-bar; and securing screws for said closure strip arranged in said slots therein.

2. The combination with a window casing, of a screen; cross-bars secured at the top and bottom thereof, said cross-bars being arranged on the inside of said screen and having vertical slots in their ends; supporting members having inwardly-projecting flanges adapted to engage the slots in said cross-bars; retaining members having inwardly-projecting flanges at their upper edges arranged below the upper cross-bar for retaining it on said supporting members; springs for securing the lower cross bar; a closure strip having vertical slots therein arranged on the inside of the bottom cross-bar; and securing screws for said closure strip arranged in said slots therein.

3. The combination with a window cas-

ing, of a screen; cross-bars secured at the top and bottom thereof, said cross-bars being arranged on the inside of said screen and having vertical slots in their ends; supporting members having inwardly-projecting flanges adapted to engage the slots in said cross-bars; retaining members having inwardly-projecting flanges at their upper edges arranged below the upper cross-bar for retaining it on said supporting members; springs for securing the lower cross-bar to the window sill, said springs being arranged in vertical holes provided therefor in the bottom cross-bar; and a closure strip adjustably mounted on said lower cross bar.

4. The combination with a window casing, of a screen; means for supporting the upper end of said screen; a cross-bar for the lower end of said screen, having vertical slots at its ends; supporting members having inwardly-projecting flanges adapted to engage the slots in said cross-bar; springs for securing the lower cross-bar to the window-sill, said springs being arranged in vertical holes provided therefor in the bottom cross-bar; a closure strip having vertical slots therein arranged on the inside of the bottom cross-bar; and securing screws for said closure strip arranged in said slots therein.

5. The combination with a window casing, of a screen; means for supporting the upper end of said screen; a cross-bar for the lower end of said screen, having vertical slots at its ends; supporting members having inwardly-projecting flanges adapted to engage the slots in said cross-bar; springs for securing the lower cross-bar; a closure strip having vertical slots therein arranged on the inside of the bottom cross-bar; and securing screws for said closure strip arranged in said slots therein.

6. The combination with a window casing, of a screen; means for supporting the upper end of said screen; a cross-bar for the lower end of said screen, having vertical slots at its ends; supporting members having inwardly-projecting flanges adapted to engage the slots in said cross-bar; springs for securing the lower cross-bar to the window-sill, said springs being arranged in vertical holes provided therefor in the bottom cross-bar; and a closure strip adjustably mounted on said cross-bar.

7. The combination with a window casing, of a screen; cross-bars secured at the top and bottom thereof, said cross-bars being arranged on the inside of said screen and having vertical slots at their ends; supporting members having inwardly-projecting flanges adapted to engage the slots in said cross-bars arranged on the outer window stops; retaining members having inwardly-projecting flanges at their upper edges arranged on the outer window stops

below the upper cross-bar; means for yieldably securing the lower cross-bar; and a closure strip adjustably mounted on the lower cross-bar.

- 5 8. The combination with a window casing, of a screen; cross-bars secured at the top and bottom thereof, said cross bars being arranged on the inner side of said screen and having vertical slots in their ends; supporting members having inwardly-projecting flanges adapted to engage the slots in said cross-bars; retaining members having inwardly-projecting flanges at their upper edges arranged below the upper cross-bar
10 for retaining it on said supporting members; springs for securing the lower cross-bar to the window sill, said springs being arranged in vertical holes provided therefor in the bottom cross-bar; and cross pins

engaging the upper ends of said springs and resting on said cross bar. 20

9. In a window screen, the combination with a window frame of a cross bar having vertical holes therein; a flexible screen cloth secured thereto; coiled springs secured to said cross bar and arranged in said vertical holes; cross pins for attaching said springs resting on said cross-bar; and means for securing the said springs to the window frame, 25
coacting for the purpose specified. 30

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

JOHN H. CHAMBERLIN. [L. s.]

Witnesses:

CLORA E. BRADEN,

MARGARET L. GLASGON.