No. 702,886. Patented June 17, 1902.

C. ROWLAND.

MEANS FOR HANGING SCREENS.

(Application filed Nov. 22, 1901.)

(No Model.)

Fig. 1.

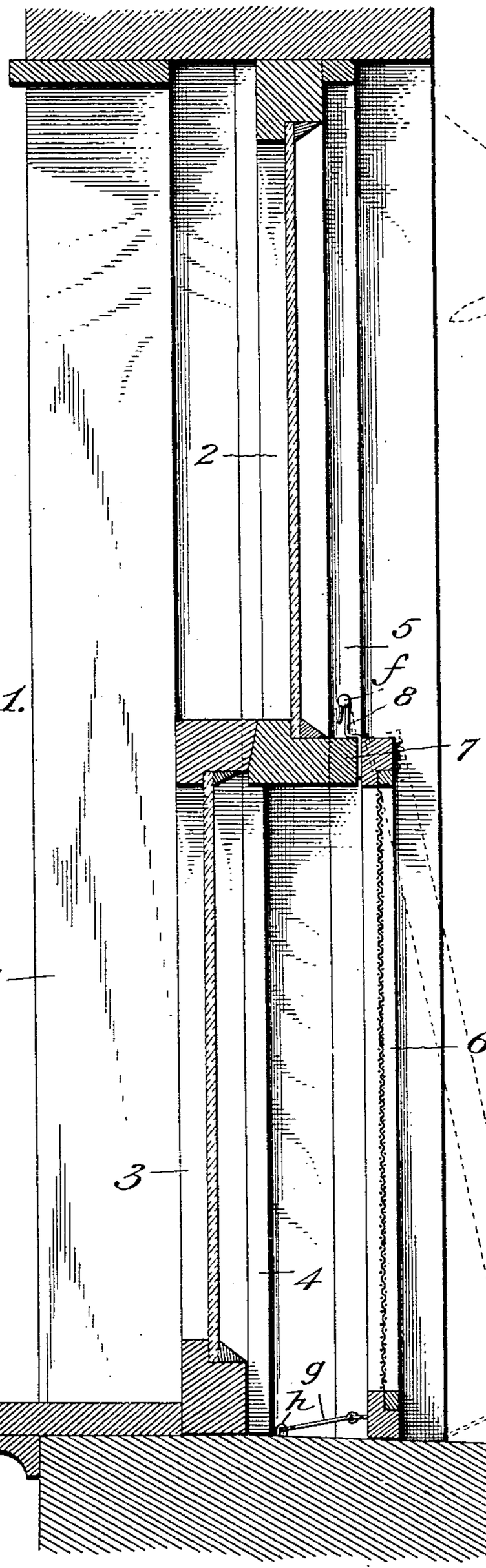


Fig. 2.

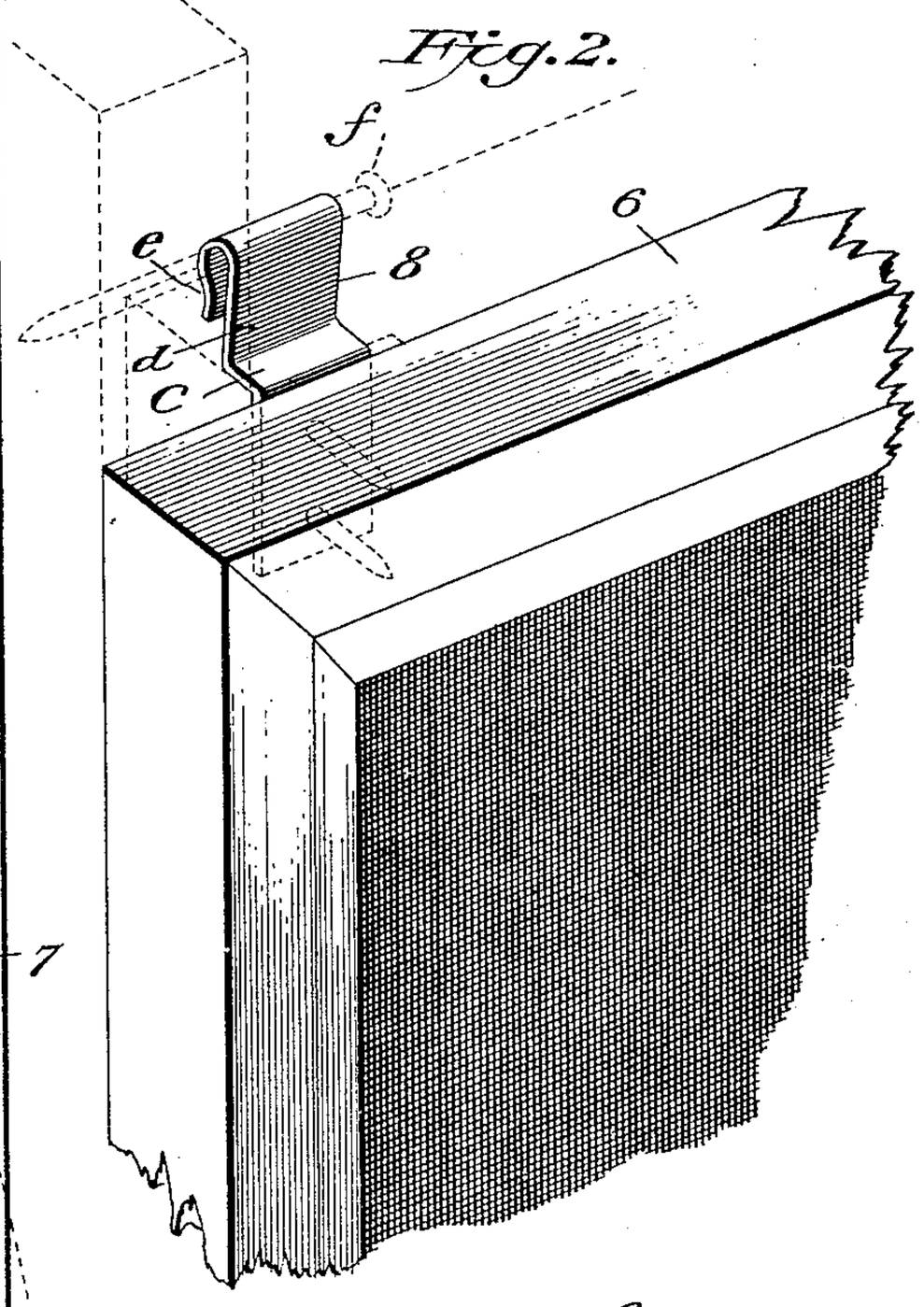


Fig. 3.

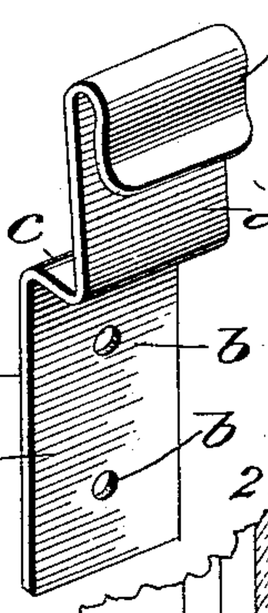


Fig. 4.

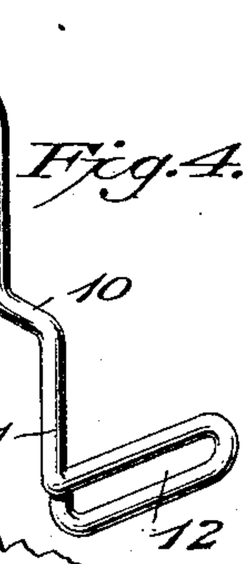
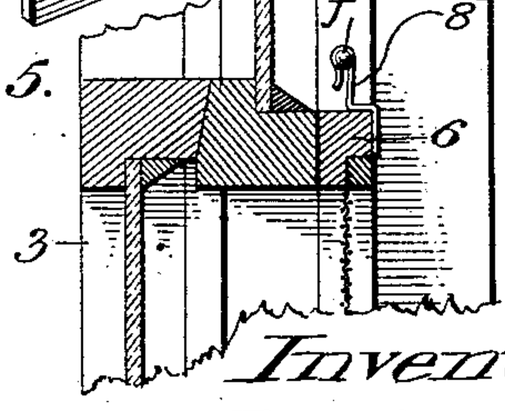


Fig. 5.



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UNITED STATES PATENT OFFICE.

CALVIN ROWLAND, OF DENVER, COLORADO.

MEANS FOR HANGING SCREENS.

SPECIFICATION forming part of Letters Patent No. 702,883, dated June 17, 1902.

Application filed November 22, 1901. Serial No. 83,332. (No model.)

To all whom it may concern:

Be it known that I, CALVIN ROWLAND, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Means for Hanging Screens; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in means for attaching screens to window-frames.

The object of my invention is to provide means whereby a screen can be quickly secured in position in a window-frame in such a manner that the screen shall have a swinging instead of a sliding movement with relation to the window-frame, thus dispensing with the usual sliding attachments, which not only mar the appearance of the window when the screen is removed, but require considerable time in order to be properly adjusted upon the window-frame.

A further object of my invention is to secure a screen in a window-frame in such a manner that either the upper or lower sash may be raised or lowered without interfering with the screen or without first having to raise the screen in order to have access to the sash.

The invention further consists in the novel means for and manner of attaching screens to window-frames, as will be set forth in the accompanying specification, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this application, Figure 1 is a vertical sectional view through a window-frame, showing a screen in its normal or closed position in full lines and swung out or open in dotted lines. Fig. 2 is a perspective view, full size, of the corner portion of a screen, showing my improved screen-supporter secured to the upper horizontal member of the frame thereof. Fig. 3 is a perspective view of my preferred form of screen-supporter. Fig. 4 is a perspective view of a modified form thereof, and Fig. 5 is a view illustrating another way of hanging the screen.

The screens in general use are those which are placed directly beneath the upper sash, those which are positioned to slide up and down, these being secured to the blind-stop which lies immediately along the outside of the upper sash or to strips or tracks secured immediately in front of the lower sash, and those which are hinged to one side of the window and swing vertically like a blind. All these forms are objectionable—the first because the upper sash cannot be lowered without removing the screen, the second because the frequent swelling of the screen-frame due to atmospheric change often renders it almost impossible to raise the same or to lower it after it has been raised, and the third because the screen swings against the adjacent edge of the window-frame and often breaks the hinges or loosens the screws. By the use of my invention these objections are entirely obviated, as the screen is positioned in the frame of the window to the rear of the upper and lower sash, thus permitting either sash to be manipulated independently of the screen and the expansion and contraction of the frame due to atmospheric changes will not in the least affect the swinging movement of the same.

Referring to the drawings, the numeral 1 indicates a window-frame of ordinary construction; 2 and 3, the upper and lower sashes, respectively; 4, the parting-strip, and 5 the blind-strip. The screen 6 when closed is designed to lie against the rear sides of the blind-strips 5, as shown, and extends from the lower part of the upper sash to the base of the frame, though, if desired, it may extend the full length of the frame.

Between the upper member of the frame of the screen 6 and the lower member of the upper sash is interposed a strip of wood 7, which extends the entire width of the window-frame or from one blind-strip to the other and closes the space between the said members, preventing the entrance of flies or other insects.

Near each corner of the upper horizontal member of the frame of the screen I attach my improved screen-supporter 8. This supporter, as will be seen by reference to the drawings, is made from a piece of sheet metal

and is formed to present a flat vertical member *a*, provided with holes *b*, through which nails or screws are passed when the supporter is secured to the screen-frame, a horizontal member C, which overlies the strip 7, and a second vertical member *d*, the extremity of which is bent to form a hook or loop *e*, which engages a nail or screw *f*, fastened in the inner side of each blind-stop 5 immediately above the strip 7. The open end of the hook or loop is contracted, as shown, to prevent its accidental disengagement from the nail or screw *f*, and the horizontal member C of the supporter positions the hook or loop so that it will lie in the center of the blind-strip, at which point the nail or screw *f* may be firmly secured.

The bottom member of the screen-frame is provided with an ordinary securing-hook *g*, which engages a staple *h*, secured to the base of the window-frame.

In Fig. 4 I have shown a modified form of supporter, in which the same is constructed of stout wire and is of the same general shape as that of the preferred form, presenting a hook 9, contracted at its open end, as shown, a horizontal member 10, designed to overlie strip 7, and a lower vertical member 11, the free end of which is bent to form a narrow loop 12, which is closed at both ends and extends laterally with respect to the supporter. This loop is designed to lie against the upper member of the frame of the screen and to receive the nails or screws which secure the supporter to the said frame.

Though I have described the screen as lying against the outer faces of the blind-stop, it is obvious that it can lie between the said blind-stops, and in this event the supporters 8 instead of being secured to the inner face of the frame, as shown in Figs. 1 and 2, would be secured to the outer face of the said screen, but so that its horizontal member will rest upon the top of the screen. When thus positioned, the upper member of the screen will lie directly against the lower end of the upper sash and the strip 7 will be dispensed with, or the strip 7 may be retained and the screen, with the supporters, secured to the outside thereof, pivoted to the hanging stiles or brick mold, as shown in dotted lines, Fig. 5.

From the foregoing it will be seen that a screen positioned and secured as herein described possesses superior advantages over the screen now in use, that it is only the work of a moment to attach or detach it, that the swinging rather than the sliding movement makes it much easier to open and close, and that the expansion or contraction of the frame due to atmospheric causes cannot affect the action of the same.

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

1. In a window-screen, and attaching devices therefor the combination with the window-frame the sash and the blind-stops, of a screen adapted to extend across the window-frame, against the outside faces of said blind-stops thereof; a strip interposed between the meeting-rail of the upper sash, and the top of the screen and extending across the window-frame from the inner face of one blind-stop to the inner face of the other; supports secured to the top of the screen-frame, whose free ends are formed into hooks or loops, which are adapted to lie against the inner faces of the blind-stops, and means, such as nails or screws which extend loosely through the hooks or loops, and into the inner faces of the blind-stops, so as to pivotally secure the screen to the said blind-stops, substantially as shown.

2. In an improved window-screen and attaching devices therefor, the combination with the window-frame the blind-stops and sash of a screen adapted to extend across the window-frame, and bear against the outside faces of said blind-stops thereof; a strip interposed between the meeting-rail of the upper sash and the top of the screen and extending across the window-frame from the inner face of one blind-stop to the inner face of the other; a hook secured to the bottom of the screen, and a staple secured to the sill of the window, in such position as to be engaged by the hook, so that the screen may be held in a closed position or against the outer faces of the blind-stops; supports secured to the inner face of the top members of the screen-frame, and at a slight distance from the ends thereof, the free ends of which are formed into hooks, which extend vertically, but inward, so as to lie against the inner faces of the blind-stops, and centrally of their width; and nails or screws which extend loosely through the said hooks and into the inner faces of the blind-stops, so as to pivotally secure the screen to the said blind-stops, substantially as described.

3. In an improved window-screen and attaching devices therefor, the combination with the window-frame and sash and the blind-stops thereof of a screen adapted to extend across the window-frame and bear against the outside faces of said blind-stops; a projecting strip secured to the inner face of the top of the screen-frame, and extending from the inner face of one blind-stop to the inner face of the other, the said strip lying against the meeting-rail of the upper sash; means secured to the bottom of the screen for holding the same in a closed position or against the outer faces of the blind-stops; supports secured to the top of the screen consisting of metal strips, the lower ends of which are provided with holes through which pass screws or nails for securing the said ends to the screen; while the upper portions of said strips are bent to form a short horizontal member, and then an upwardly-extending vertical member, the end of which is bent to form a hook, which is slightly contracted at its open end, the said hooks lying centrally of the

width of the blind-stops; and nails or screws secured in the inner faces of the blind-stops, upon which the said hooks are hung, so that the screen may have a swinging movement, substantially as shown.

4. In a window-screen, and attaching devices therefor, the combination with a window-frame and its blind-stops, of a screen adapted to extend across the said frame against the outside faces of said blind-stops; a strip interposed between the meeting-rail of the upper sash and the top of the screen and extending across the window-frame from the inner face of one blind-stop to the inner face of the other; supports secured to the top of the screen on the inner side thereof, consisting of a section of wire bent to form a hook, the said wire being then bent to form a short horizontal member, and a downwardly-extending member, the free end of which is formed into a loop through which the nails or screws are passed for securing the same, means secured to the bottom of the screen for holding the same in a closed position, and means, such as screws or nails, which are engaged by the aforesaid hooks, so that the screen is allowed a swinging motion, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CALVIN ROWLAND.

Witnesses:
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BESSIE THOMPSON.