

(No Model.)

F. M. JAY.
WINDOW SCREEN.

No. 507,011.

Patented Oct. 17, 1893.

Fig. 2

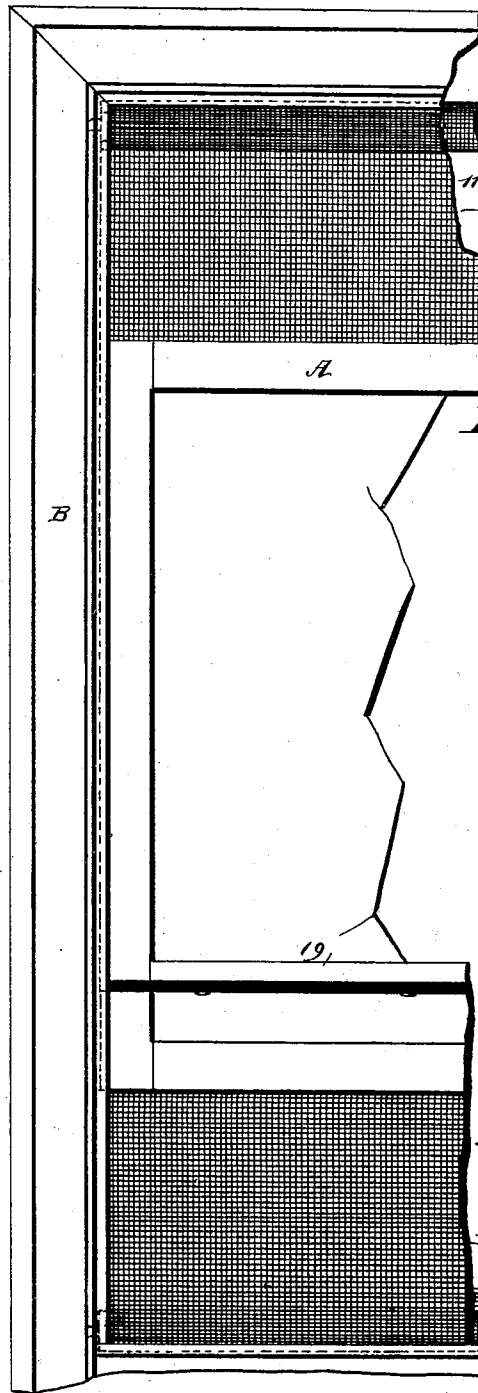
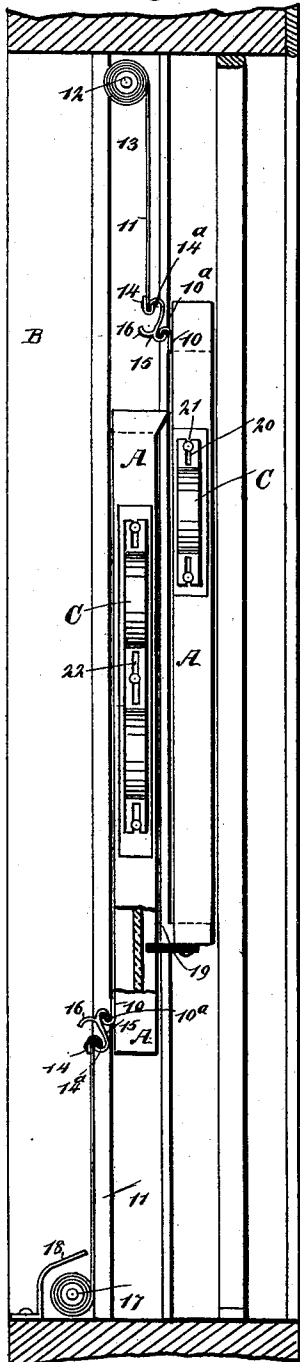


Fig. 1.

Fig. 5.

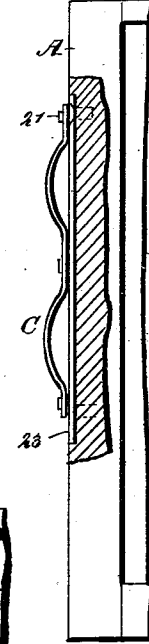
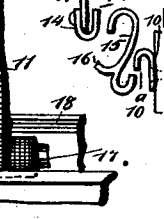


Fig. 6.



WITNESSES:

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Fig. 3

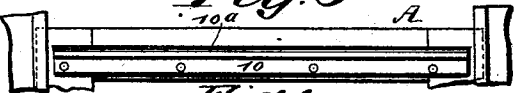
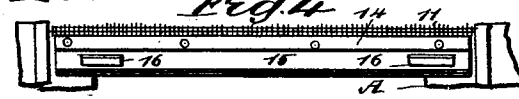


Fig. 4



INVENTOR

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UNITED STATES PATENT OFFICE.

FRANCIS M. JAY, OF GUTHRIE, OKLAHOMA TERRITORY.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 507,011, dated October 17, 1893.

Application filed April 10, 1893. Serial No. 469,724. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. JAY, of Guthrie, in the county of Logan and Territory of Oklahoma, have invented a new and useful Improvement in Window-Screens, of which the following is a full, clear, and exact description.

My invention relates to an improvement in window screens, and it has for its object to provide an improvement whereby window screens may be secured to window sashes in such a manner that when the upper sash is lowered or the lower sash raised, the screen will automatically cover the opening which would otherwise be left exposed by the sash.

A further feature of the invention is to so construct the window screen that it may be expeditiously and conveniently attached to or detached from a window sash, the screen remaining a permanent fixture upon the window frame.

Another feature of the invention is to provide a means whereby when the upper and lower sashes are manipulated there will be no space for the entrance of flies, dust, &c., between the panes of glass in the lower sash and the bottom rail of the upper sash.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claim.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a partial front elevation of the window frame and window sashes, illustrating the application of the screen thereto. Fig. 2 is a vertical section through the window frame, illustrating the sashes and screen in edge view. Fig. 3 is a detail rear elevation of the upper rail of the upper sash viewed from the rear. Fig. 4 is a detail rear elevation of the upper rail of the upper sash, illustrating the screen connected therewith. Fig. 5 is a detail sectional view, illustrating the manner in which the retaining devices of the sashes connect therewith; and Fig. 6 is a detail view illustrating the manner in which the connection is effected between the sash and a screen.

In carrying out the invention a plate 10, is secured to the outer face of the upper rail of the upper sash, extending nearly from end to end of said rail; and the plate 10, is bent outward and downward at the top to form a hook section 10^a. The screen 11, adapted for attachment to the upper sash A, is attached to a spring roller 12, of any approved construction, which roller is journaled in suitable bearings preferably in the upper end of the lower sash groove 13 in the window frame B, as shown in Fig. 2. The screen may be of fabric, or of wire, or of any desired or approved material, and a plate 14, is secured to the lower end of the screen at the back or outer portion thereof, which plate is bent upwardly in front of the screen, forming a hook 14^a, the hook 14^a being the reverse of the hook 10^a formed upon the upper sash.

The connecting medium between the plate 14 on the screen and the plate 10 on the upper sash, consists of a plate or bar of metal 15, which is bent in such shape that it is essentially S-shaped in cross section, comprising a body and a hook at each end of the body, the hooks being however on opposite sides; and in order that this S-bar or plate may be readily manipulated it is provided at intervals with handles 16. One hook portion of the S-plate is made to engage with the hook of the sash plate 10, as shown best in Fig. 2, and preferably the handles are located adjacent to the hook section connecting with the window frame. It will thus be observed that when the window sash is drawn downward the screen will follow, and will close the opening which would otherwise be exposed by the upper sash, the screen 11, being of a width which will enable it to extend from one inner face of the window frame to the other.

The lower sash has a plate attached to the outer face of its lower rail, identical to the plate secured to the top rail of the upper sash with the exception that the hook section of the plate faces upward instead of downward. An S-plate is likewise employed to connect the lower sash with the screen, the roller 17 of this lower screen being preferably journaled just above the sill and outside of the sash groove 13 of the lower sash, the roller and screen being ordinarily protected by a hood or casing 18, attached to the sill and ex-

tending over the roller, as is likewise best shown in Fig. 2.

In Fig. 3 I have illustrated in detail the plate 10 attached to the upper sash, and in Fig. 4, I have shown the screen as connected with the sash, while in Fig. 6 the various attaching mediums between the screen and the sash are shown in detail and enlarged.

When window sashes are provided with screens attached in the manner above described, it is evident that no matter whether the lower sash be raised or the upper sash lowered, the openings made thereby in the window frame will be covered by a screen; in fact, that the window frame will be closed at all times, either entirely by window sashes and panes, or partially by them and partially by the screens.

In order to prevent flies and dust from entering a room through the space that usually exists between the bottom rail of the upper sash and the panes of glass of the lower sash when the sashes are carried from their normal position, an elastic strip 19 of rubber or like material is secured to the lower edge of the upper sash, and this strip extends outward practically to an engagement with the panes of glass in the lower sash, as shown in Fig. 2. Thus when both sashes are practically open the connection between the two sashes will be essentially as tight as when the sashes are in their closed position. It will be understood that the elastic strip 19 may be shaped to receive the division rails in the window sashes.

In order to hold the sashes in any position in which they may be placed, and further to overcome the action of the spring in the spring rollers upon the sashes, retaining devices C, are located upon the end faces of said sashes, as shown in Figs. 2 and 5. Preferably the devices consist, as shown in the drawings, of one or more spring plates having sliding movement upon the sashes. The springs may be a single bow spring, as shown at the right in Fig. 2, the ends whereof are provided with

slots 20, through which screws or pins 21, are loosely passed, and one of such springs may be employed upon each end of the window sash, or a series of them, or as shown at Fig. 5 and at the left in Fig. 2, the device may consist of one piece of metal provided with a bow section at each side of its center, and a longitudinal slot 22 in that event is produced in the central portion of the device in addition to the end slots. In applying these devices ordinarily, the end surfaces of the sashes are plowed or otherwise treated to receive a metal plate 23, and upon the outer face of this plate the spring devices have movement, the screws 21, passing through the plate into the sash. The operation of these devices is apparent, as the bow portion of the springs will engage with the walls of the sash grooves in the window frame, and being in frictional engagement therewith will serve to hold the sash wherever it is placed, and the springs may be made strong enough, and preferably are so made, to overcome any resistance afforded by the springs in the rollers to which the screens are attached. This device is exceedingly simple and economic, and may be applied to any window frame and its sashes, without marring, and without necessitating the alteration of either.

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

The combination, with a window frame, a spring-controlled roller journaled therein, a screen secured to the roller, and a hook attached to the free end of the screen, of a window sash held to travel in the frame, hooks secured to the sash, and a connecting hook, of essentially S-shape in cross section, engaging with the hook of the screen and the hook on the sash, the connecting hook being removable, as and for the purpose set forth.

FRANCIS M. JAY.

Witnesses:

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