

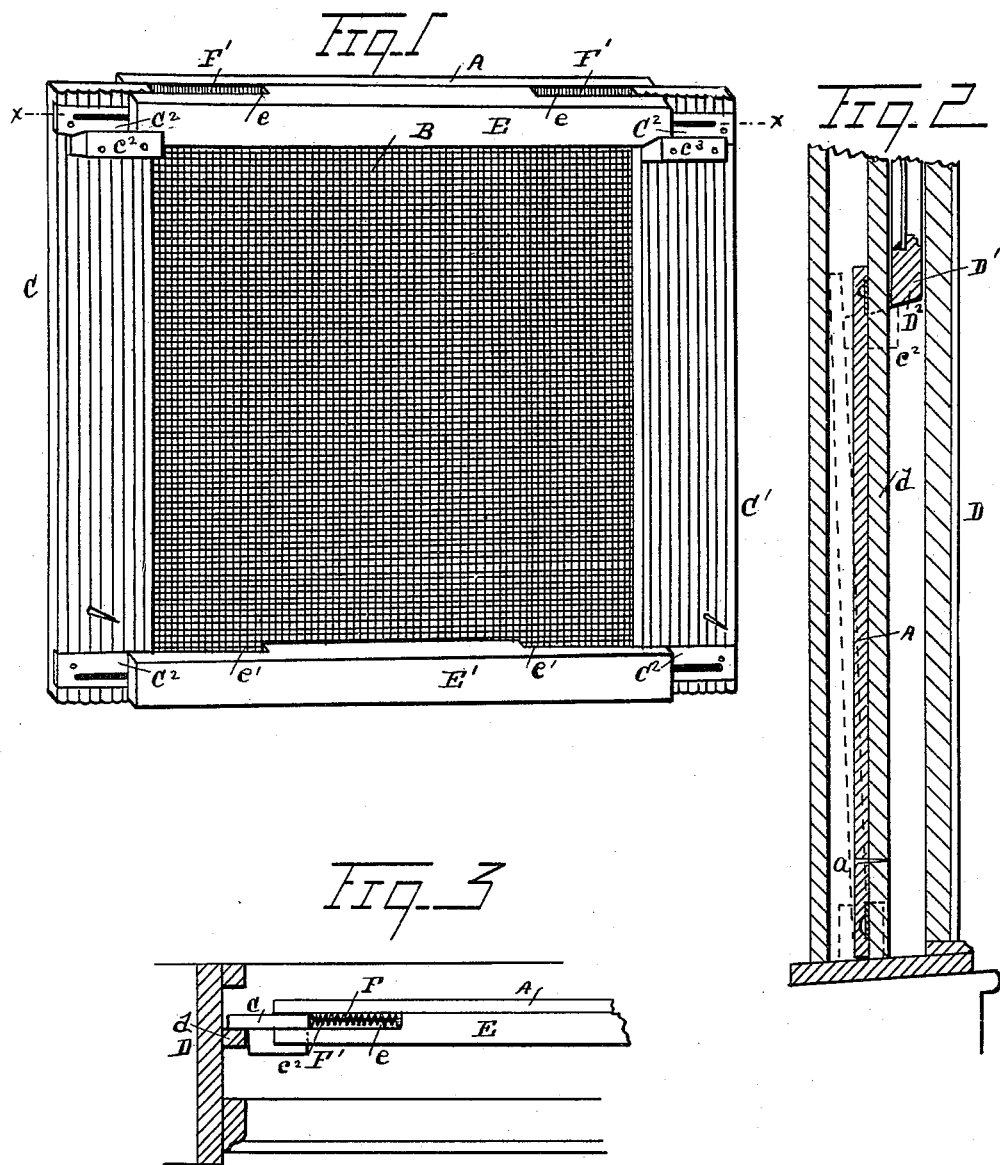
(No Model.)

2 Sheets—Sheet 1.

P. AHLBERG.
WINDOW SCREEN.

No. 419,398.

Patented Jan. 14, 1890.



Witnesses
John Schuman.
Charles F. Salow.

Inventor
Peter Ahlberg
By his Attorney
Newell S. Wright.

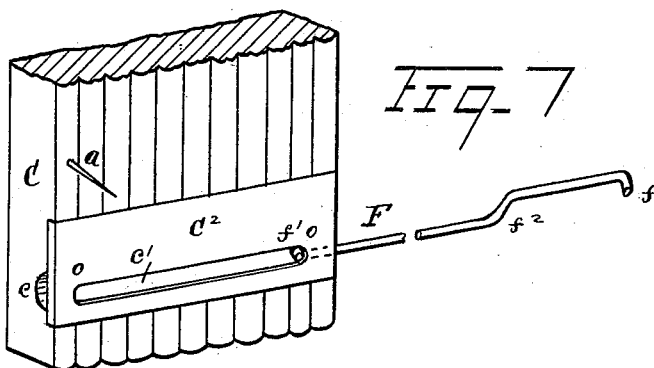
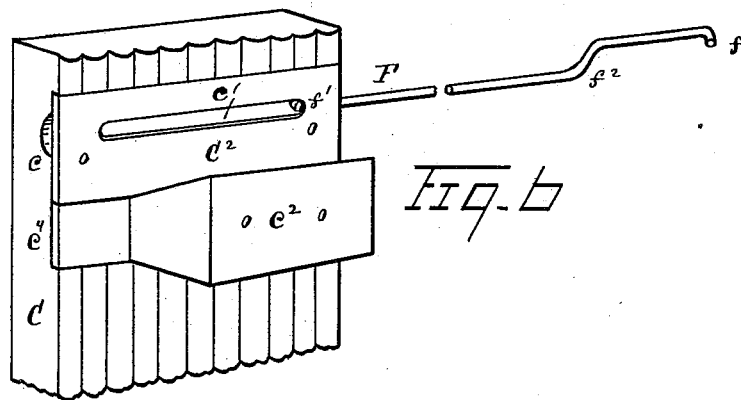
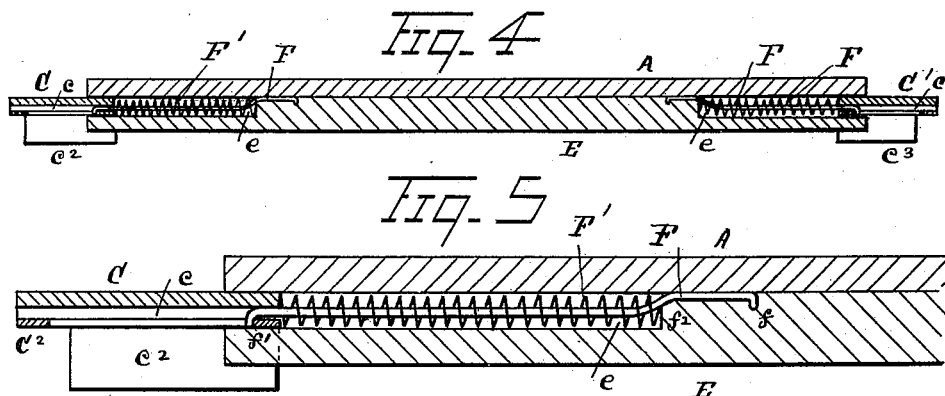
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

PETER AHLBERG, OF DETROIT, MICHIGAN.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 419,398, dated January 14, 1890.

Application filed May 18, 1889. Serial No. 311,228. (No model.)

To all whom it may concern:

Be it known that I, PETER AHLBERG, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have
5 invented a certain new and useful Improvement in Window-Screens; and I declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in window-screens;
15 and it consists of the combinations of devices and appliances hereinafter specified, and pointed out in the claims, and more particularly illustrated in the accompanying drawings, in which—

20 Figure 1 is a view in perspective illustrating my invention. Fig. 2 is a vertical section showing my improved screen in place. Fig. 3 is a horizontal section through a window-frame, showing the position of the screen
25 in plan. Fig. 4 is a horizontal section through the frame on the line *xx*, Fig. 1. Fig. 5 is an enlarged view of one end of the same. Fig. 6 is a separate view of the upper end of one of the wings, showing the rod engaged there-
30 with. Fig. 7 is a separate view of the lower end of one of the wings, also showing the rod engaged therewith.

I carry out my invention as follows:

A represents any ordinary screen-frame
35 provided with screen fabric B, engaged therewith in any suitable manner, the said frame and fabric constituting a permanent four-sided frame.

40 The object of my invention is more particularly to make an adjustable screen, which I accomplish by providing the screen A B, as above described, with wings made adjustable laterally in a novel and efficient manner.

45 To this end C and C' represent wings engaged, as hereinafter explained, with the sides of the frame A, so as to be adjusted to or from the frame A, to adapt the screen to window-frames of different widths.

50 D represents the window-frame provided with the usual parting-strip *d*.

D' is the sash, constructed, as is customary, with a beveled base, as shown at D².

Engaged upon the upper and lower sides of the frame A, I provide suitable cross-bars E E', recessed at their respective extremities, as
55 shown at *ee'*, sufficient to receive a stationary or immovable rod, as shown at F, and a spring F', a rod and a spring being engaged in each recess, making four independent springs and
60 rods. The springs are preferably coiled springs surrounding the respective rods. The rods are permanently engaged in the recesses in any suitable manner—as, for instance, each
65 may be constructed with a shoulder *f* at the rear embedded in the adjacent side of the cross-bar. This construction and arrange-
ment fixes the rod in place and renders it stationary. The outer extremities of said rods
70 F have a movable engagement with the adjacent wings in any desired manner. As here- with shown the wings are constructed near
each end with a recess *c*, adapted to receive the outward end of one of the rods and allow the wing to be moved to and fro upon the
75 outer ends of the adjacent rods, the recesses extending laterally across the wing to give all necessary play. To prevent the disengagement of the wings with the said rods, the outer
80 extremities of the rods may be turned to form a shoulder *f'*, and a cap C², provided with an elongated slot *c'*, be suitably fastened upon the wing over the respective recesses therein. The
upturned extremity *f'* of the rod is engaged in the slot *c'* of the cap or plate C², and thus
85 the wing is effectually prevented from any liability of displacement or disengagement from the rod. The cross-bars E E' intermediate
the recesses, at their respective ends, may be left solid. The inner ends of the rods as so
90 constructed may readily be driven into engagement with the bar by a blow of a hammer, and when the bar is united to the frame A there is no liability of the rod becoming
disengaged.

I prefer to bend the rods, made preferably
95 of metal, as shown at *f*², so as to run straight through the middle of the recess to their connection with the wings. It will thus be seen that the rod is stationary with respect to the frame A and its adjacent cross-bar, while the
100 wing has a sliding or movable engagement with the rods. The springs serve to force outward the wings into position against the adjacent window-frame. As each spring acts

independently, should the window-frame be out of plumb the wing will readily adapt itself thereto, as the spring at the top or bottom of the wing will force the wing against the frame whether the frame be exactly vertical or not. The wing can thus be canted, as circumstances may require, to insure a tight fit. This union of the wings with the stationary rods and the fixed connection of the rods with the cross-bars or adjacent frame is very simple and economical and not likely to get out of order.

I prefer to locate my adjustable screen outside the parting-strips, the wings fitting in against the frame of the window outside said strips, as shown in Figs. 2 and 3. The cross-bar E may be of a thickness sufficient to close up snugly against the lower part of the sash when the sash is raised into proper position. To make the wings insect-proof where they project laterally beyond the extremities of the cross-bars, I provide the wings at their upper ends with blocks c^2 c^3 , located so as to slide underneath the cross-bars as the wings are adjusted to and fro. I design, however, to make these blocks c^2 c^3 not only serve to make the screen insect-tight, but also to uphold and support the window-sash. For this purpose the blocks are made of sufficient thickness to project underneath the sash when in place, so that the sash may rest upon said blocks. This will be especially convenient where the screen is required to be used with old-fashioned windows or windows without cords and weights. In many old-fashioned windows having stops at intervals upon the sides, should the stops not come in proper position to support the sash relative to the screen, it would make no difference, as the sash may thus be supported by the screen itself upon the said blocks. To impart the strain upon the blocks more effectually upon the vertical wings, I prefer to recess the wings to receive the blocks, as indicated, for instance, at c^4 . By locating the metal plates C^2 upon the same side as the blocks, as shown in the drawings, the recesses c and c^4 may communicate, and so be formed with the same tool by one and the same operation. I design to bevel the upper edges of the blocks to conform to the bevel of the lower face of the sash to make a close fit.

In locating the screen in place in the window-frame I prefer, when properly adjusted,

to tack the wings in place at the lower end, as indicated at a . I design also to loosely engage the upper end of the wings outside the parting-strips, so that when it is desired to lower the window the screen may be tilted outward, as shown in dotted lines, Fig. 2, to permit the window-sash to descend past the supporting-blocks. The adjacent edges of the sash and supporting-blocks being beveled, the resting of the sash upon the blocks will tend to draw the screen inward snug against the sash and parting-strips to make it insect-proof. It will be seen that the blocks are not liable to be torn off, as the weight of the window is thus thrown upon the upright wings. In raising the window the top of the screen may readily be pulled inward to support the window thereupon in the manner described. So in closing the window it is unnecessary to remove the screen, as its upper end may readily be pushed outward. I do not limit myself to making the plates C^2 of metal if plates of that description are employed.

As the cross-bars E E' are not required to be grooved, as in some other devices of this class, said bars are made stronger.

I contemplate as coming within the scope of my invention to employ the adjustable wings with or without the springs, as may be preferred.

What I claim as my invention is—

1. In a screen, the combination, with a frame and a fabric thereto attached, of the cross-bars secured to the top and bottom of said frame, the stationary rods secured between said cross-bars and the frame, wings having recesses into which the said rods are located with their free ends, and plates provided with slots for engaging the ends of said rods, for the purpose set forth, the said plates covering said recesses.

2. In a screen, the combination, with a frame having fabric thereto attached, of the stationary rods, the wings having laterally-adjustable engagement with said rods and provided with the recesses c^4 , and rests to support the window-sash secured in said recesses, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

PETER AHLBERG.

Witnesses:

N. S. WRIGHT,
CHAS. F. SALOW.