

F. P. EDLER.
WINDOW SCREEN.

APPLICATION FILED AUG. 14, 1912.

1,057,813.

Patented Apr. 1, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

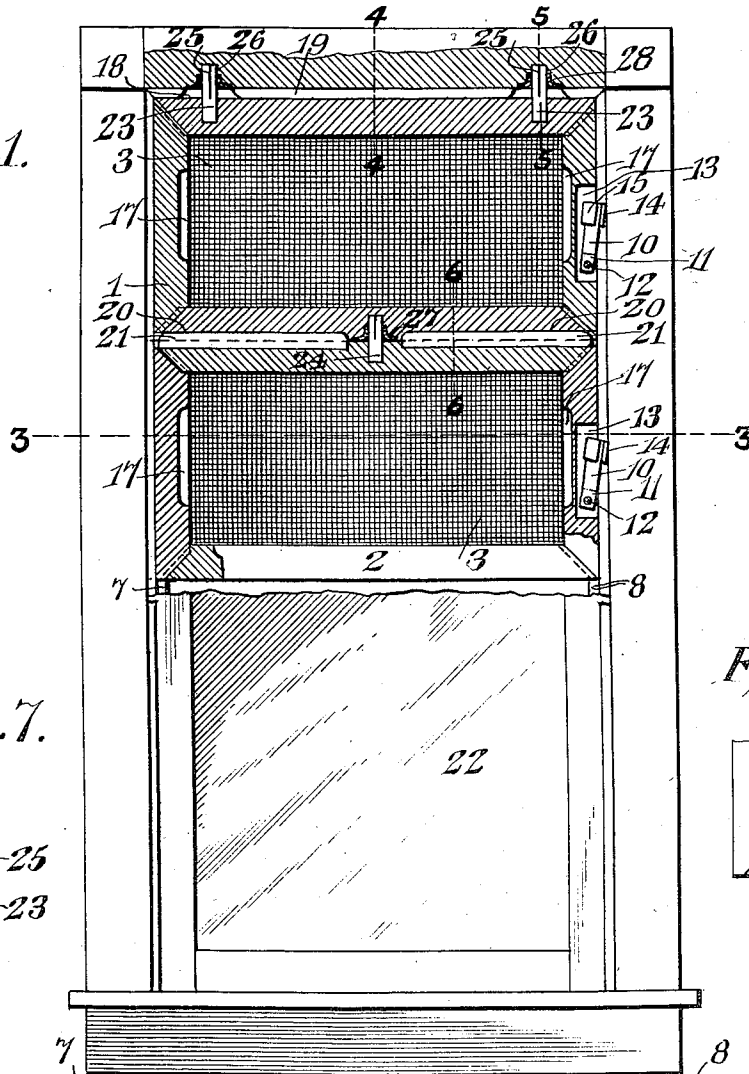


Fig. 7.

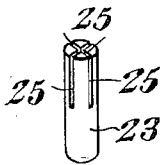


Fig. 8.

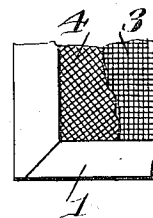
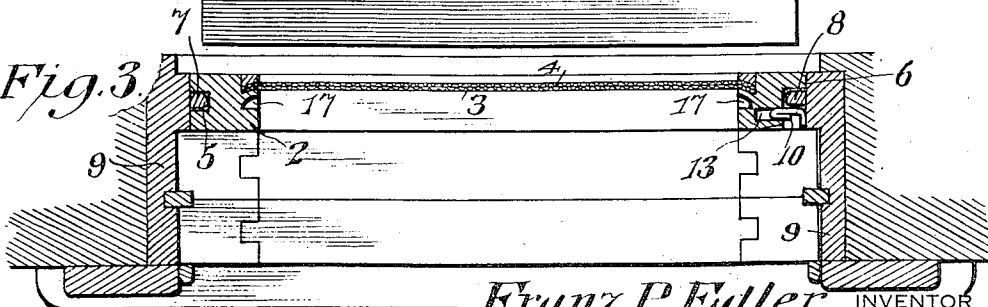


Fig. 3.



WITNESSES

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Fig. 2.

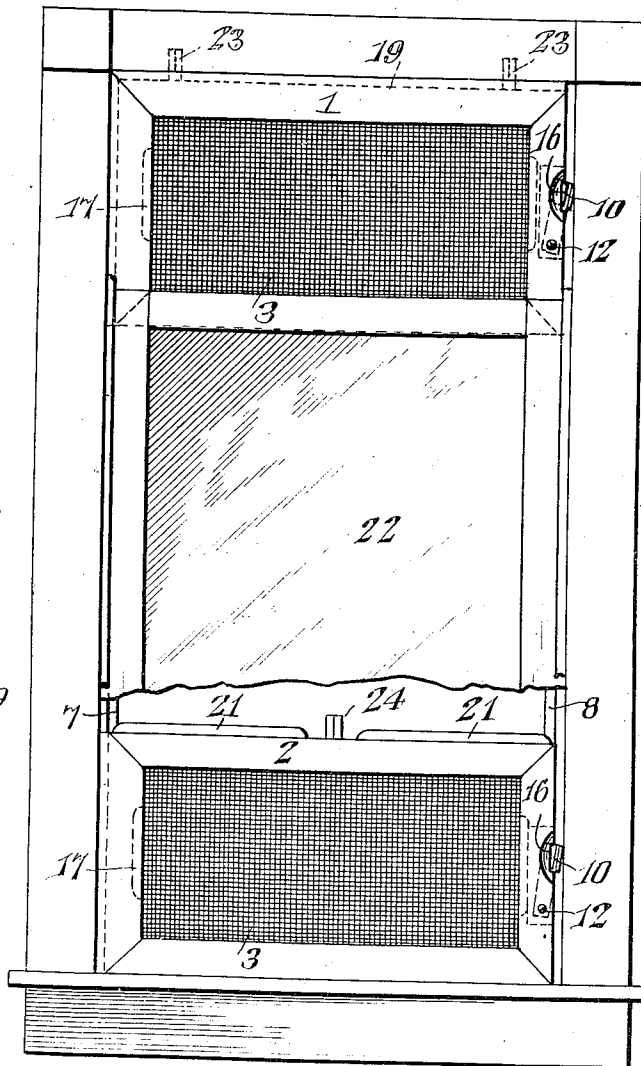


Fig. 11.

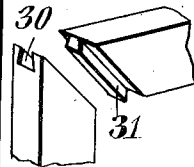


Fig. 9.

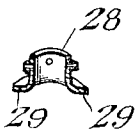


Fig. 10.

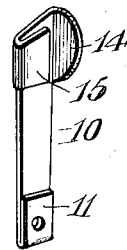


Fig. 4.

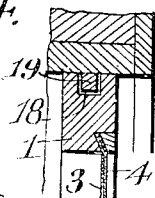


Fig. 5.

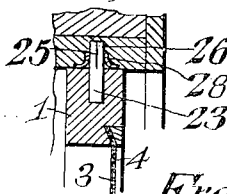
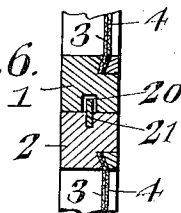


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRANZ PAUL EDLER, OF CHICAGO, ILLINOIS.

WINDOW-SCREEN.

1,057,813.

Specification of Letters Patent.

Patented Apr. 1, 1913.

Application filed August 14, 1912. Serial No. 715,109.

To all whom it may concern:

Be it known that I, FRANZ P. EDLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Window-Screen, of which the following is a specification.

The invention relates to improvements in window screens.

10 The object of the present invention is to improve the construction of window screens, and to provide a simple and inexpensive window screen comprising a pair of upper and lower screen members or
15 screens, adapted to be readily introduced into and removed from a window frame, and capable of being arranged with both the upper and lower screens or screen members at either the top or bottom of the win-
20 dow, or with one at the top and the other at the bottom to permit the heated air to escape at the top and the fresh air to enter at the bottom.

25 A further object of the invention is to provide a window screen, equipped with a device adapted to secure the screen members in slidable engagement with the window frame, and capable also of retaining the
30 screen members at any intermediate position between the top and bottom of the window frame.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully
35 described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within
40 the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

45 In the drawings:—Figure 1 is an elevation partly in section of a window screen, constructed in accordance with this invention, the upper and lower screen members or screens being arranged at the top of the
50 window. Fig. 2 is an elevation of the same, one of the screen members or screens being arranged at the top of the window and the other at the bottom thereof. Fig. 3 is a horizontal sectional view on the line 3—3
55 of Fig. 1. Fig. 4 is a detail vertical sectional view on the line 4—4 of Fig. 1. Fig.

5 is a similar view on the line 5—5 of Fig. 1. Fig. 6 is a detail sectional view on the line 6—6 of Fig. 1. Fig. 7 is a detail perspective view of one of the resilient clamping studs. Fig. 8 is a detail view of a portion of one of the screen members, illustrating the arrangement of two thicknesses of
60 screen material. Fig. 9 is an enlarged detail view of one of the sockets for the resilient clamping studs. Fig. 10 is a detail
65 view of one of the pivoted catches. Fig. 11 is a detail perspective view, illustrating the construction of one of the joints of the window screen frame.

Like numerals of reference designate corresponding parts in all the figures of the
70 drawings.

In the accompanying drawings in which is illustrated the preferred embodiment of the invention, the window screen comprises
75 in its construction upper and lower screen members or screens 1 and 2, each preferably provided with two thicknesses of screen material 3 and 4, the screen material 3 having
80 the wires of mesh arranged vertically and horizontally, while in the other screen material 4, the wires are arranged diagonally. This arrangement effectually excludes gnats and other small insects. The screen material may be secured to the frames of the
85 upper and lower screens by any suitable means, and the bars of the screen frames may be secured together at their ends in any preferred manner. Each of the upper
90 and lower screen members or screens is provided at the left hand side with a groove 5 and at the right hand side with a rabbet 6, and is retained in slidable engagement with vertical strips 7 and 8 of a window
95 frame 9 by means of a pivoted catch 10.

The pivoted catch is constructed of a single piece of spring metal doubled at the end 11 to form two thicknesses and provided through the doubled portion with a perforation through which passes a pin 12, or other
100 suitable fastening device, which pivots the catch in a recess 13 of the screen member or screen. The recess 13 is narrow and oblong, and the catch is adapted to be swung into
105 and out of the same to engage it with and disengage it from the strip 8, and it is provided at its free end with a projecting operating lip 14, and it has a resilient wing 15. The lip 14 extends outwardly and it is received within a notch 16 of the screen frame,
110

when the catch is moved inwardly to permit the screen member or screen to be removed from the window frame.

In introducing the screen into the window frame, the grooved side is engaged with the strip 7 at one side of the window frame, and the rabbeted side of the screen is brought into position against the other vertical strip 8 and is secured in slidable engagement with the same by swinging the catch 10 outwardly. The catch 10 is maintained in its engaging position by the resilient wing 15, formed integral with the catch at the free end thereof and bent inwardly across the same and terminating adjacent to the lip 14. The resilient wing, which, when not compressed, is arranged at an acute angle to the body portion of the catch, is adapted to be compressed in the recess 13 and it also maintains the catch in frictional engagement with the strip 8 to retain the catch in its engaging position and also for holding the screen at the desired vertical adjustment.

The screen frame of each screen or screen member is recessed or cut away adjacent to the notch 16 to enable the lip 14 to be readily operated by the thumb, and the sides of the screen are also provided at their inner edges with opposite recesses 17 to enable the screen to be readily gripped in replacing it in and removing it from the window frame.

The upper screen 1 is provided in its upper edge with a groove 18 to receive a top strip 19 of the window frame, and the lower edge of the upper screen 1 is also provided with a groove 20 in which extends a metallic strip 21 of the lower screen 2 when the screens 1 and 2 are fitted together either at the upper portion of the window, as shown in Fig. 1, or at the bottom thereof. The combined dimensions of the upper and lower screens are equal to the dimensions of one of the sashes 22 of the window frame, and this enables both screens to be arranged at either end of the window frame when the sashes are moved in the opposite end, and the screens may also be arranged above and below the sashes, as illustrated in Fig. 2, to afford free ventilation. The upper screen 1 is provided at the top with spaced projecting studs 23, and the lower screen 2 is provided with a central stud 24. Each of the studs consists of an inner shank or portion, which is secured in a socket or recess of the screen frame on which it is mounted, and it projects upwardly therefrom, the projecting portion being provided with diametrical slots or kerfs 25 forming resilient clamping portions. The projecting resilient clamping portions of the upper screen are adapted to frictionally engage spaced sockets 26 in the top of the window frame, and the central stud 24 of the lower screen is adapted to engage a similar socket 27 in the lower bar of the frame of the upper

screen. Each of the sockets is lined at its lower portion with a metallic thimble 28, having an outwardly extending flange 29 at the lower end. The resilient studs extend into the sockets and project beyond the upper ends of the thimbles. The resilient portions of the studs are compressed in inserting the same into the sockets, and they expand beyond the upper ends of the thimbles, and there is sufficient frictional engagement to maintain the sashes in an elevated position, and as the clamping action at the top of the upper screen is twice that at the top of the lower screen, the latter is adapted to be pulled out of engagement with the upper screen without disconnecting the said upper screen from the top of the window frame.

The bars of the frames of the screens 1 and 2 are preferably connected by dovetailed miter joints, as illustrated in Fig. 11 of the drawings, one member of the joint being provided with a dovetailed groove 30 and the other having a dovetailed rib 31 to slidably engage with the groove.

What is claimed is:—

1. In combination with a window frame and its sashes, an upper screen and a lower screen mounted in the frame, said screens having a combined area equal to one of the sashes, a frictional connection between the upper screen and the window frame to maintain the said screen at the top of the said frame, and a frictional connection between the meeting edges of the lower screen and the upper screen to permit both screens to occupy the top of the frame, the frictional connection between the two screens being weaker than the frictional connection between the upper screen and the frame, whereby the lower screen may be separated from the upper screen and lowered without disconnecting the upper screen from the said frame.

2. The combination with a window frame provided at opposite sides with strips, of a screen provided at one side with a groove to slidably engage one of the strips and having a rabbet at its opposite side to receive the other strip, said screen being also provided at its rabbeted side with a recess, and a catch pivoted in the said recess and adapted to be swung inwardly and outwardly to engage it with and disengage it from the adjacent strip of the window frame and provided with a resilient wing compressible against the catch to permit the latter to be moved into the recess and maintaining the catch in frictional engagement with the window frame when the catch is swung out of the recess.

3. The combination with a window frame provided at the top with spaced sockets, of an upper screen having a single socket at the bottom and provided at the top with projecting resilient studs arranged to ex-

tend into the sockets of the window frame and frictionally engaging the walls of the same, and a lower screen provided at the top with a single resilient stud arranged to frictionally engage with the socket at the bottom of the upper screen, said screens being slidable in the window frame and the lower screen being adapted to be pulled out of engagement with the upper screen without disengaging the same from the window frame.

4. The combination with a window frame provided at the top with spaced sockets, of upper and lower screens slidable in the window frame, the upper screen being provided at the bottom with a single socket, metallic

thimbles lining the lower portions of the said sockets, spaced resilient studs projecting from the upper screen, and a single resilient stud extending from the lower screen, said studs being arranged to enter the said sockets and to extend beyond the metallic thimbles thereof.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANZ PAUL EDLER.

Witnesses:

E. W. MUELLER,
KARL STEIN.