

No. 785,309.

PATENTED MAR. 21, 1905.

J. S. JOHNSON.
DOOR AND WINDOW FLY ESCAPE SCREEN.
APPLICATION FILED JULY 13, 1904.

FIG. 1.

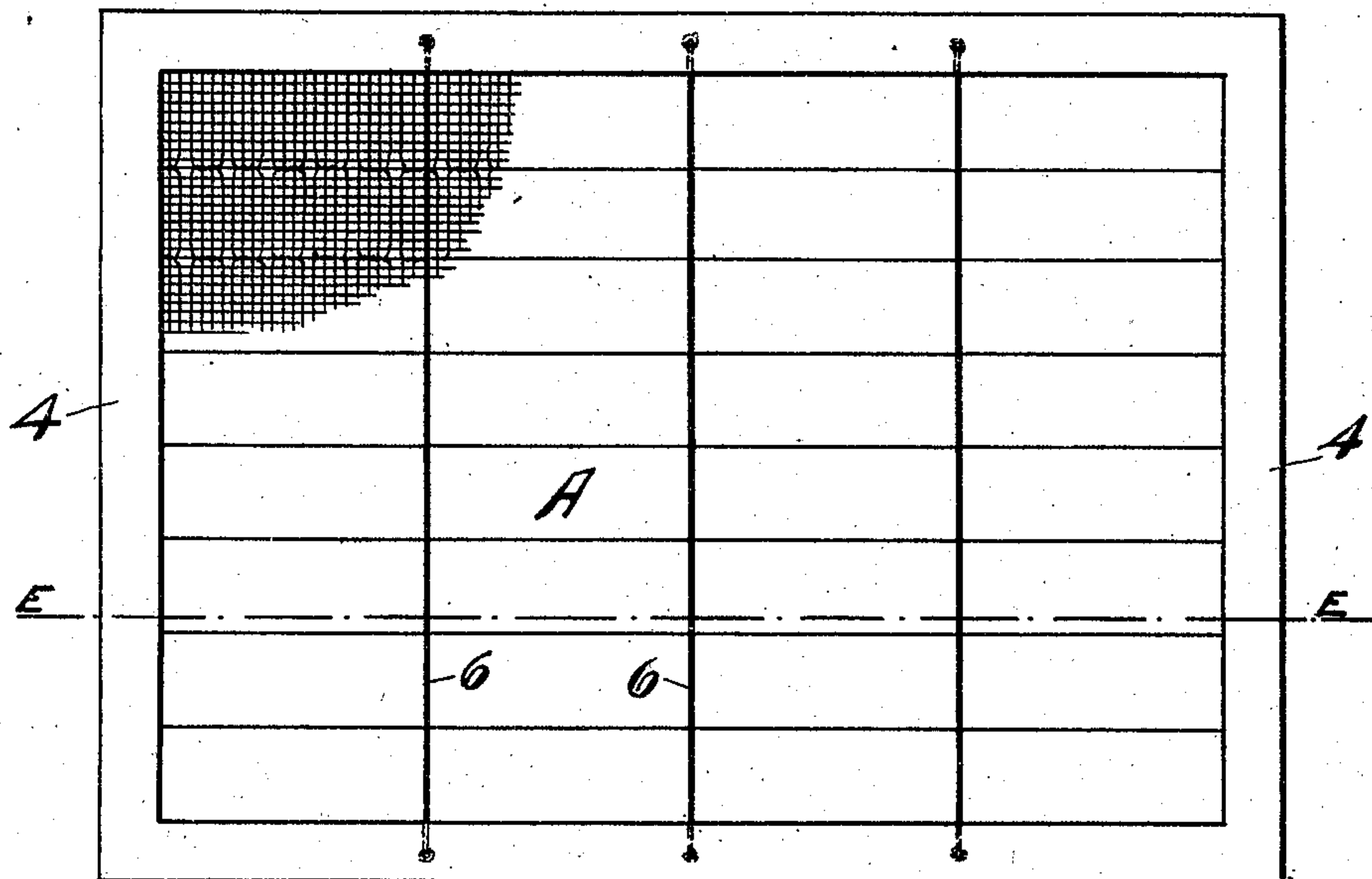


FIG. 2.

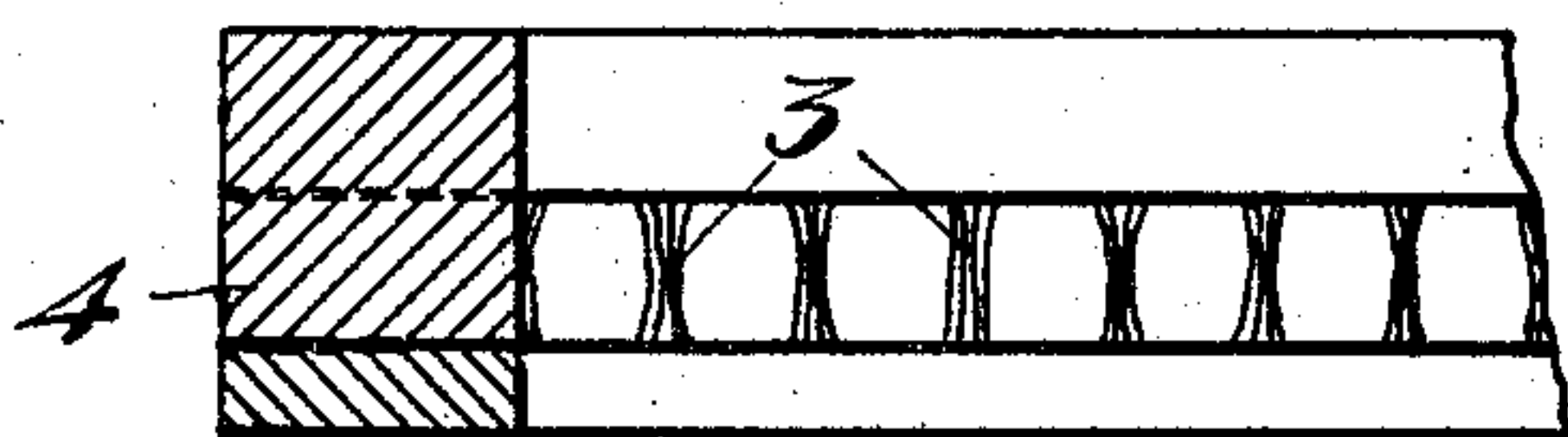
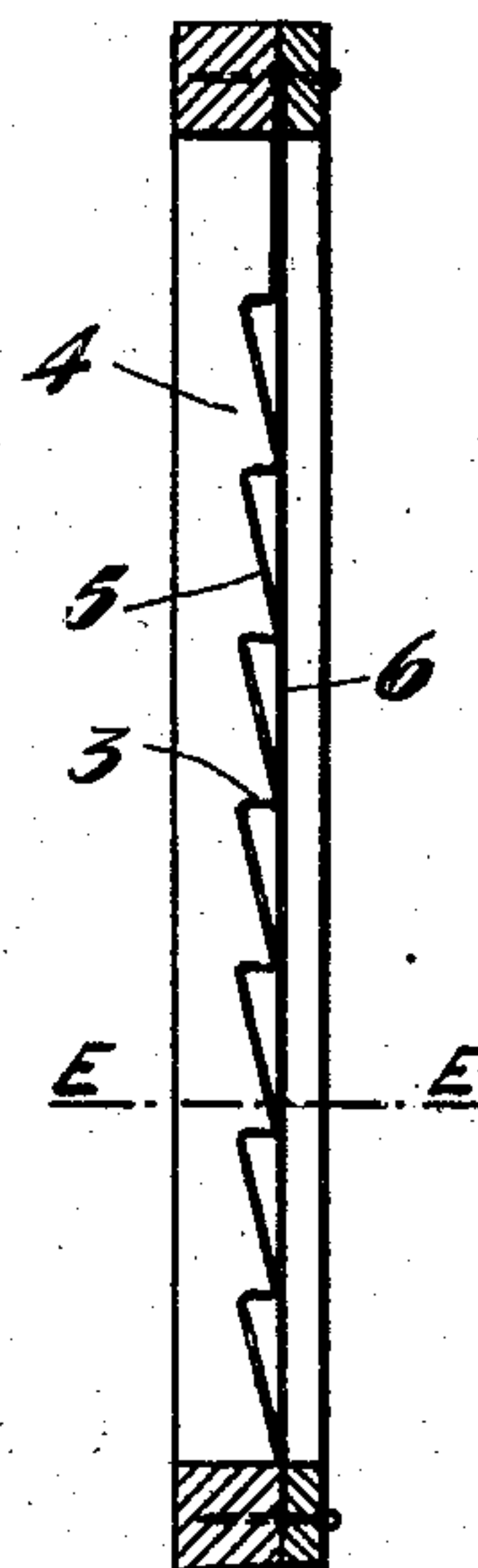


FIG. 3.



WITNESSES,
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UNITED STATES PATENT OFFICE.

JOSEPH S. JOHNSON, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF
ONE-HALF TO FRANCIS CUTTING, OF SAN FRANCISCO, CALIFORNIA.

DOOR AND WINDOW FLY-ESCAPE SCREEN.

SPECIFICATION forming part of Letters Patent No. 785,309, dated March 21, 1905.

Application filed July 13, 1904. Serial No. 216,397.

To all whom it may concern:

Be it known that I, JOSEPH S. JOHNSON, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Door and Window Fly-Escape Screens, of which the following is a specification.

My invention relates to a screen device which is especially designed to permit the escape of flies from rooms, while practically preventing their entrance from the outside.

It consists in a novel construction of the screen, means for attaching it to the vertical frame or rails, which form the sash therefor, and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a front view of my screen. Fig. 2 is a part section on line E E of Figs. 1 and 2, showing openings in same. Fig. 3 is a vertical section through screen.

Various screen devices have been constructed for the purpose of preventing the admission of flies into apartments, and means have been provided by which the flies would automatically escape by reason of their tendency to pass toward the light and to move upwardly on windows and the like.

In my invention I employ a screen A. This screen is woven so that one or more of the wires forming the filling of the screen are omitted at certain intervals, these intervals being at points where it is desired to make offsets or bends in the screen. If found desirable, wires may also be omitted from the warp; but I have found that the omission of filling-wires is practically sufficient. After the screen has been woven in this manner it is bent at approximately right angles, so as to form short offsets, within which offsets the spaces caused by the omitted wires are located. The warp-wires may then be separated transversely in these offsets, as shown at 3, thus leaving a series of open spaces which extend from one side to the other of the screen within each of the offsets. The warp-wires being thus crowded together will form openings of sufficient size to allow flies or other

insects to pass through, and the wires being thus crowded together form a sufficient bond and continuation of the screen-surface to insure its being rigid against any separation on account of the spaces. The side bars 4 of the frame are formed with vertical inclined inner surfaces, as at 5, and the lower ends of these inclines have a thickness substantially equal to the width of the offsets and coinciding therewith, so that when the screen is nailed or otherwise secured to the frame the surfaces of the frame upon each side correspond with the angles and offsets of the screen, which is thus firmly fixed in place. The inclination of the approximately vertical portions is from the bottom outward. Then the offsets project inwardly toward the apartment, each offset being sufficiently separated from the other to provide a plurality of the openings between the top and bottom of the screen.

It will be seen that flies from their natural habit of moving upwardly will when they alight on the screen pass upwardly until they arrive at the perforations in the offsets and will then pass through to the outside of the screen.

If the screen be wide, it may be strengthened to any degree by one or more vertical rods or bars 6, which are fixed to the screen in any suitable manner. These bars are substantially straight, extending from the inner angle of each offset across the space formed by the inclination below and being attached again to the screen at a point contiguous with the next offset. I have thus a substantially straight brace not subject to any weakness or spring which would be caused by bending the braces so as to follow the line of the offsets. These straight brace-rods may be fixed in the top and bottom frames or sashes in which the screen is fixed and may, if desired, be drawn tight by any suitable means, so as to have a considerable tension.

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

An improved screen having in combination vertical wires forming the warp, horizontal wires forming the filling of the screen,

one or more of said filling-wires being omitted at intervals between the top and bottom of the screen, offsets formed by bending the screen at approximately right angles, 5 said offsets including the spaces formed by the omitted filling-wires and the warp-wires being separated within these offsets to form openings and strengthening-ties across the offsets, a frame having the sides formed 10 with inclines and offsets corresponding with the screen to which frame the screen is secured and one or more vertical tension-rods extending between the top and bottom mem-

bers of the frame, said rods substantially straight, extending from the inner angle of 15 each offset across the space formed by the inclination below, and being attached again to the screen at a point contiguous with the next offset.

In testimony whereof I have hereunto set 20 my hand in presence of two subscribing witnesses.

JOSEPH S. JOHNSON.

Witnesses:

G. M. DOGGETT,
HENRY C. DIBBLE.