No. 736,291. PATENTED AUG. 11, 1903.

W. OATES, Jr.

SCREEN.

APPLICATION FILED FEB. 14, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

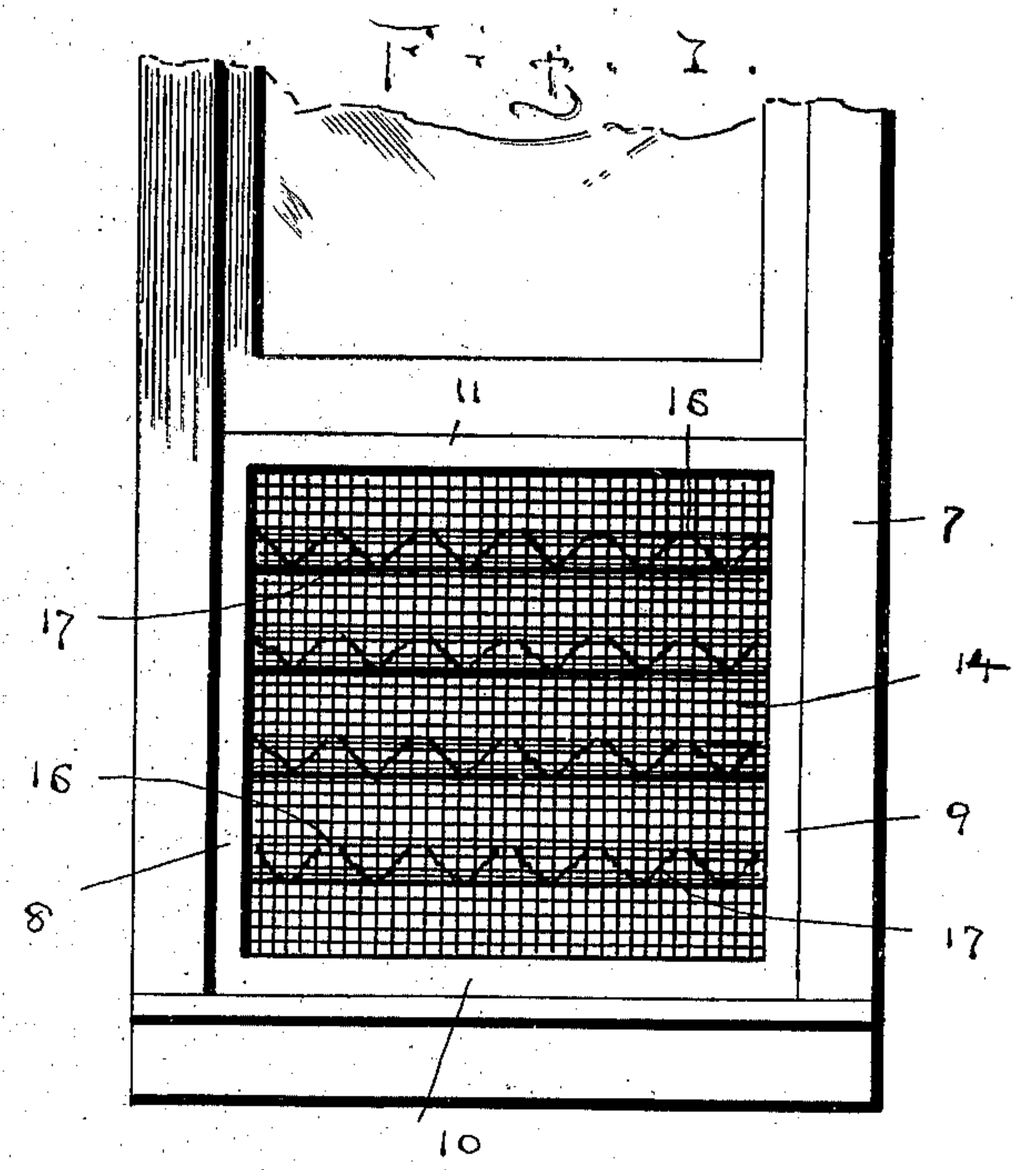


Fig. 2.

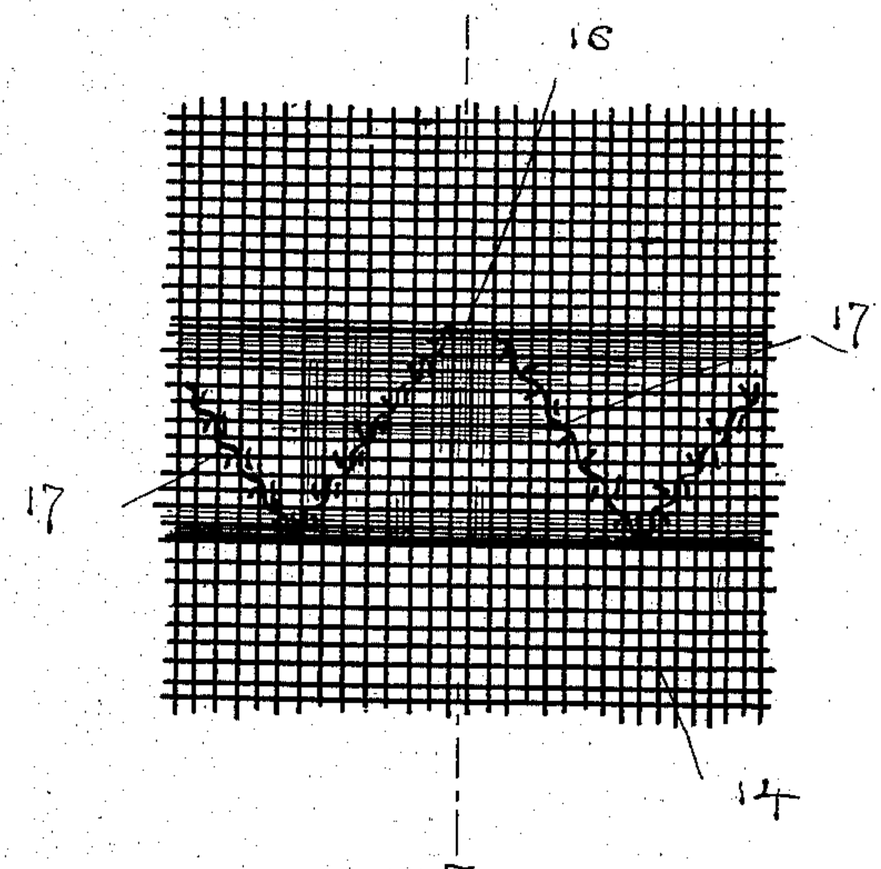
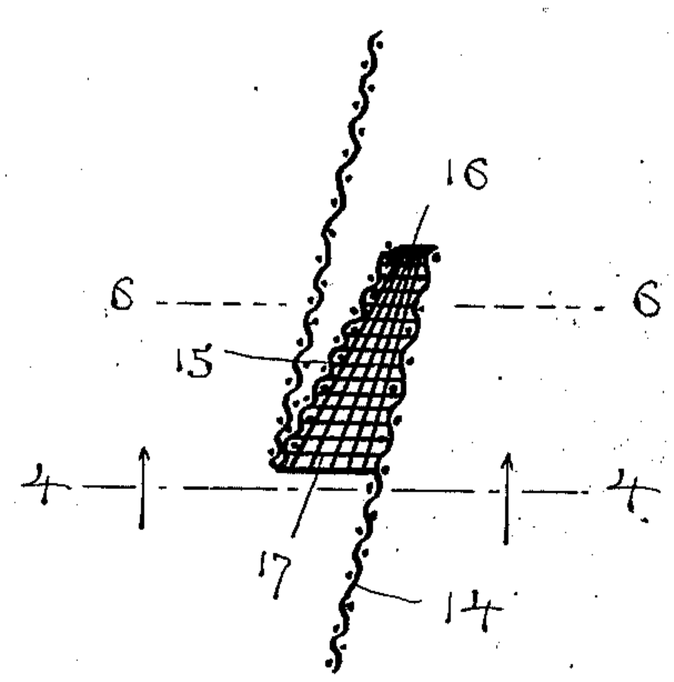


Fig. 3.



Witnesses
F. W. Perry.
B. T. Funk

Inventor
Wm Oates, Jr.

By Victor J. Evans
Attorney.

No. 736,291. PATENTED AUG. 11, 1903.

W. OATES, Jr.

SCREEN.

APPLICATION FILED FEB. 14, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

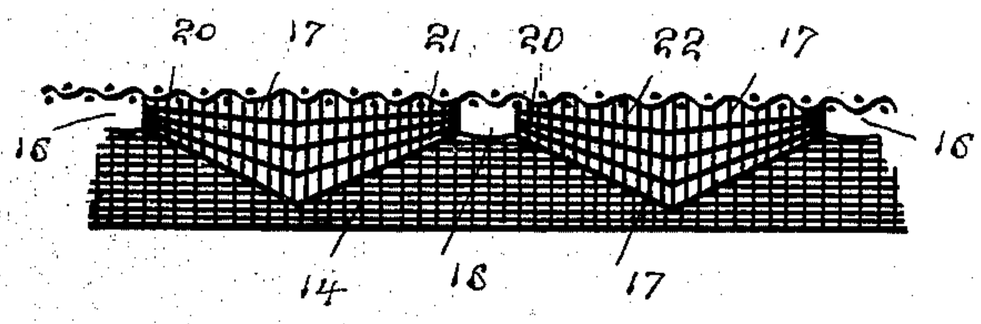


Fig. 5.

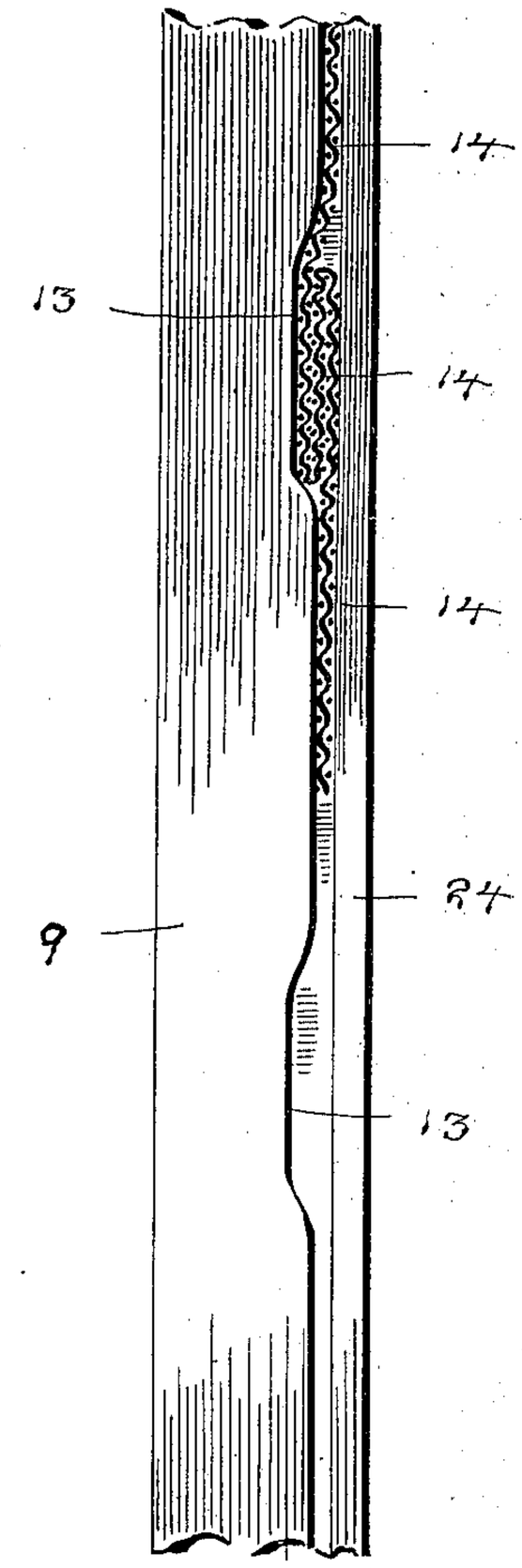


Fig. 6.

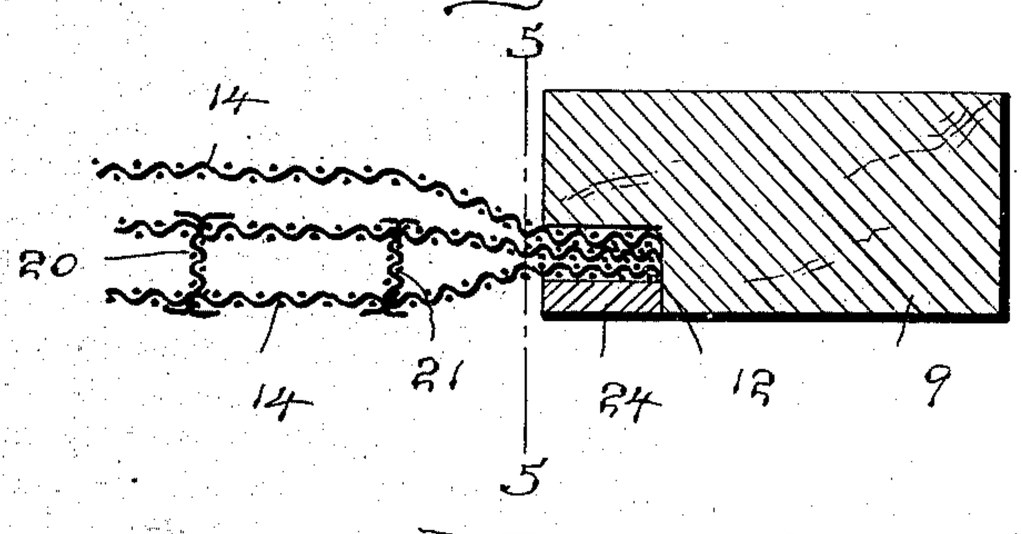
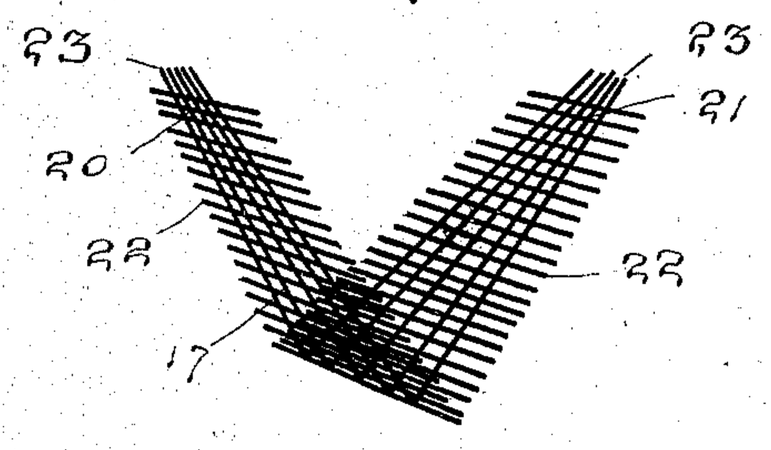


Fig. 7.



WITNESSES:
F. W. Dieby.
B. F. Funk

INVENTOR
Wm Oates, Jr.
BY Victor J. Evans
Attorney

No. 736,291. Patented August 11, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM OATES, JR., OF CENTRAL CITY, SOUTH DAKOTA.

SCREEN.

SPECIFICATION forming part of Letters Patent No. 736,291, dated August 11, 1903.

Application filed February 14, 1903. Serial No. 143,400. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM OATES, Jr., a citizen of the United States, residing at Central City, in the county of Lawrence and State of South Dakota, have invented new and useful Improvements in Screens, of which the following is a specification.

This invention relates to window-screens; and one of the principal objects of the invention is to provide an efficient and durable construction of screen which will permit insects to pass out from the inclosure for which the screen is provided, but prevent their returning thereinto.

The invention consists in certain novel arrangements and combinations of parts which will be specifically referred to in the description, reference being had to the accompanying drawings, in which—

Figure 1 is a view in elevation of a window-frame equipped with a screen constructed in accordance with my invention. Fig. 2 is a view of an enlarged portion of the wire mesh illustrating one of the folds and the diverging walls of the guides. Fig. 3 is a vertical sectional view on the line 3 3 of Fig. 2. Fig. 4 is a sectional view through the wire mesh on the line 4 4 of Fig. 3. Fig. 5 is a sectional view through a portion of the mesh, the part of the rail and clamping-strip being shown in elevation. Fig. 6 is a transverse sectional view through the screen and guides on the line 6 6 of Fig. 3 and showing the manner of clamping the ends of the fold to the frame. Fig. 7 is a detail perspective view of one of the guides.

The reference-numeral 7 designates a window-frame of any preferred construction, being secured in the wall of a room or other inclosure with which the screen is to be equipped. The screen is of such size and form as to fit in the frame and may be constructed to either slide or swing with relation thereto. The screen is provided with an approximately rectangular frame comprising vertical strips 8 and 9, connected at their upper and lower extremities by transverse strips 10 and 11. The vertical strips are provided at their inner edges with rabbets 12, and at suitable intervals the rabbeted portions of the strips are recessed, as at 13, to form seats for the clamped portions of the folds of the mesh, which is secured to the screen in the manner to be explained hereinafter. The mesh, which is designated by the reference-numeral 14, is folded transversely entirely across the width of the same, each fold being in the form of a plait and spaced apart from the main portion of the mesh. These folds are designated by the reference-numeral 15, and the upper edge of each fold is provided with a plurality of egress-openings 16, through which the insect may pass out from the room. In order to direct the insects toward the openings, suitable partitions are provided, a detail view of one of which is shown in Fig. 7. This partition is designated by the reference-numeral 17, being approximately V-shaped, and one of the ends 20 or 21 of the partition rests adjacent to one side of the opening 16, the vertex of the partition terminating at the lower portion of the fold, the other end of the partition resting adjacent to the succeeding opening, and by arranging these partitions in series or successively across the screens, so that their side walls will diverge in a downward direction or converge toward the openings, a substantially inverted-V-shaped passage is formed in each intance for communicating with each opening, so that the insects will, as a matter of course, be directed to the openings. In order that the several partitions may be securely fastened to the mesh, the free ends of the transverse wires 22 are passed through the mesh and bent around through the longitudinal or transverse wires thereof, preferably by a suitable tool. The ends of the longitudinal wires 23 can be bent over the edges of the respective openings or allowed to protrude directly beyond the edge of the opening to offer an additional impediment to the insect in the event that it should attempt to reënter the opening from above. An additional advantage in interlocking the walls of the deflecting sides of the partition is to preserve the form and shape of the folds, as the longitudinal resistance of the transverse walls will be sufficient to preserve the relative positions of the parts of the fold, so that the lower edge thereof will at all times be held from the main portion of the mesh. The respective ends of the various folds are

clamped into the seats 13 on the vertical strips 8 and 9 by a clamping-strip 24, which rests in the rabbet, the outer surface of the clamping-strip being flush with the respective frame-strips, whereby a smooth and even appearance will be provided for the screen. By providing these seats 13 the ends of the folds can rest therein, so that the remaining portion of the mesh can be readily clamped by the strip 24, as an equal bearing will be provided against each vertical strip for its entire length.

It will of course be obvious that any number of the transverse folds and other appurtenances may be provided, and I do not limit myself to any of these nor to the particular form of screen, but reserve the right to make such minor changes in form and construction as may suggest themselves from time to time and come within the scope of the appended claim.

Having thus described the invention, what is claimed as new is—

In a screen, the combination of a wire-mesh covering having a series of transverse holes projected downwardly and extended upwardly to form intervening spaces between the folded portions thereof and the adjacent part of the mesh, said folds at the point where they start from the main body of the mesh having openings therethrough at regular intervals at their upper edges, and a series of V-shaped partitions individually interposed between the folds and the main body of the mesh and terminating at their upper ends adjacent to the opening in the upper edges of the folds, each partition gradually decreasing in width toward its ends and terminating flush with the lower terminals of the folds, the said partitions being secured to the mesh by the terminals of the longitudinal and transverse wires thereof which are inserted through the openings of the mesh and bent around the wires of the latter.

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

WILLIAM OATES, JR.

Witnesses:

AURAN ANDERSON,

WILLIAM J. JELBERT.