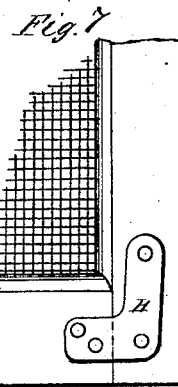
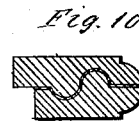
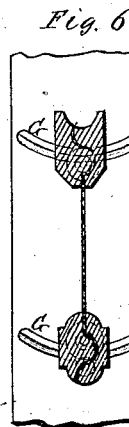
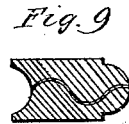
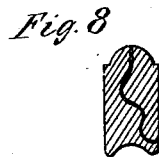
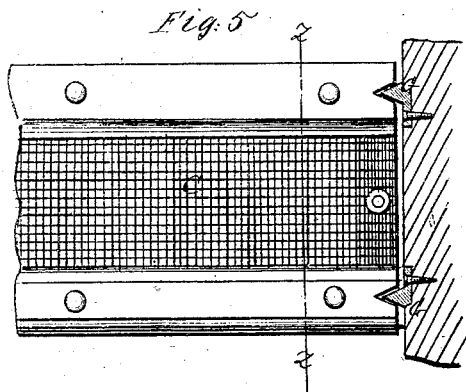
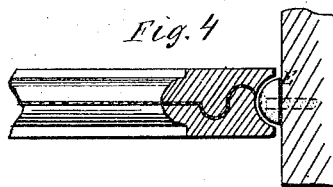
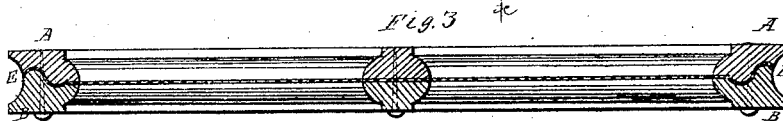
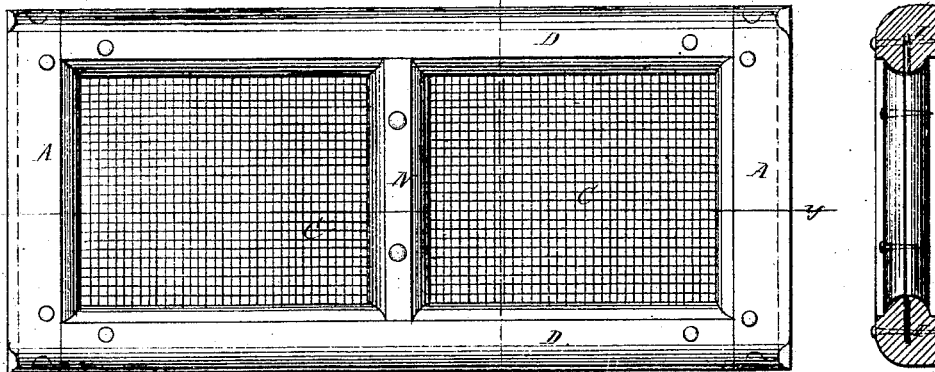


D. Goodwillie. Window & Door Screen.
 108348

Fig. 1 PATENTED OCT 18 1870 *Fig. 2*



Witnesses.
A. W. H. H. H.
G. S. H. H.

Inventor:
D. Goodwillie.
 per *Wm. H. H.*
Attorney

United States Patent Office.

DAVID GOODWILLIE, OF CHICAGO, ILLINOIS.

Letters Patent No. 108,348, dated October 18, 1870.

IMPROVEMENT IN WINDOW AND DOOR-SCREENS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DAVID GOODWILLIE, of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Window and Door-Screens; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to screens for doors and windows, to exclude flies, mosquitoes, and other insects.

I will first describe my invention in connection with all that is necessary to a full understanding thereof, and then clearly point it out in the claim.

Figure 1 is a front elevation of a window-screen, made according to my improvement.

Figure 2 is a vertical section of the same.

Figure 3 is a longitudinal section.

Figure 4 is a sectional detail, showing how the screen-frame may be held in the window-frame.

Figures 5 and 6 show an arrangement of screens without side rails or stiles; also, a mode of holding them in the window-frame.

Figure 7 is a front view of a part of a screen, showing how the frames may be strengthened at the corners, or joints of cross-rails, by angle-plates.

Figures 8 to 11, inclusive, show several forms of the joints of the stiles, which are made in two parts, for the reception of the screens at two opposite edges between them, for attaching them firmly thereto, by rivets or screws passing through the said two parts and the screen.

Similar letters of reference indicate corresponding parts.

I propose to make the stiles of the frame of two parts, A B, with ogee faces, or any equivalent variation of the said form, and clamp the opposite edges of the wire-cloth C between them, by fastening the two parts together upon it by nails, rivets, screws, or other like articles, and to insert the upper and lower cross-rails D, which are previously prepared with plane saw-kerfs, for the reception of the other edges of the screen between the said stiles after they are nailed to the cloth, by slipping the ends of the said

cross-rails previously cut to fit the edges of the stiles between them, so as to stretch the cloth, and cause it to hold the frame together with sufficient force for ordinary screens.

The stiles are preferably made with the grooves E in the edges which bear against the window-frames, both for the purpose of securing them in the window by means of strips of wood or buttons E nailed onto the window-frame, and fitting into the said grooves when the screens are in place, and also by facilitating the dressing down of the stiles when fitting them into the window.

As a means of further simplifying the construction of window and door-screens, I propose, in some cases, to make use of the stiles or parts of the frame, made and applied as shown at A B, for the cross-rails, applying them to the lower and upper edges only, and fastening them in the window by the curved plates G attached to the window-frames, as shown, and projecting into grooves prepared for them in the ends of the rails, as shown in figs. 5 and 6, onto which ribs the said rails may be placed by placing the notches coincident with the lugs, and pushing them along the latter.

When it may be desirable to arrange these frames on hinges, to swing as in doors, the corners of the frames may be further strengthened by the application of the angle-plates H, which may be readily nailed on.

The edges of the wire-cloth, which are arranged in the strips D, should be folded over and doubled, as indicated at I, fig. 2, for the better holding of the nails or screws driven through them.

For intermediate cross-bars between the stiles, or upper and lower bars, two or more bars, N, may be placed across the sheet and nailed together.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

A frame, formed of two parts, A B, combined, as described, with wire-cloth C and rails D, to form a screen.

Witnesses:

DAVID GOODWILLIE.

K. IVERSON,

ROBT. MALCOM.