No. 871,679. PATENTED NOV. 19, 1907.

E. FEIGHERY.

WINDOW SCREEN.

APPLICATION FILED JUNE 25, 1906.

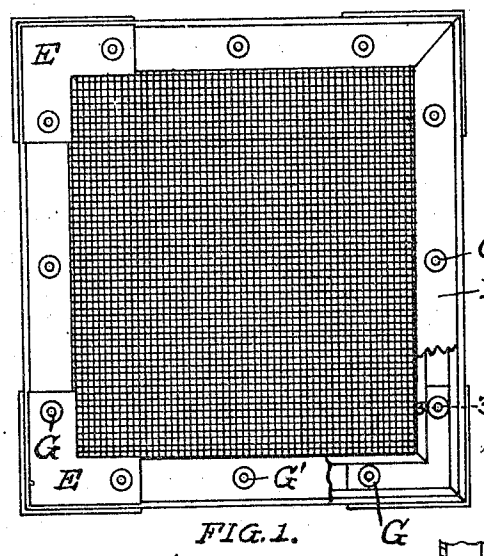


FIG. 1.

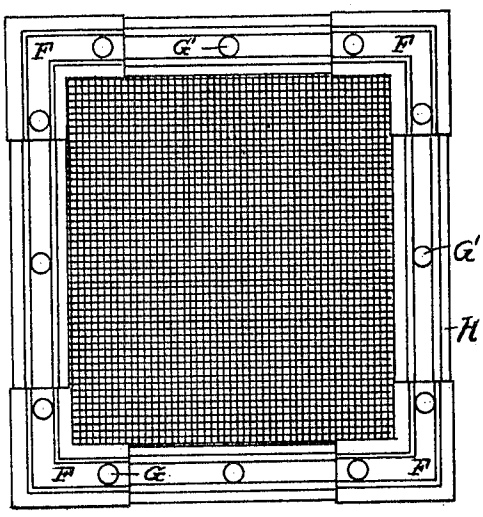


FIG. 2.

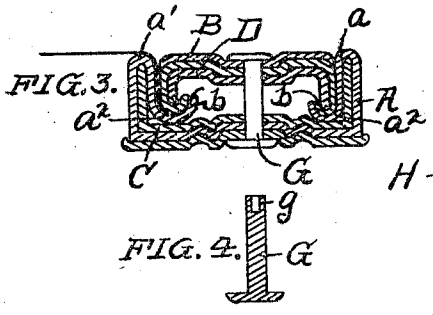


FIG. 3.

FIG. 4.

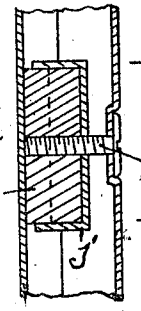


FIG. 8.

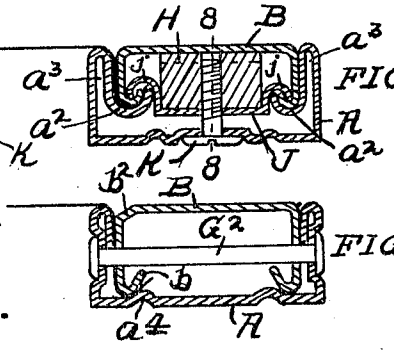


FIG. 7.

FIG. 9.

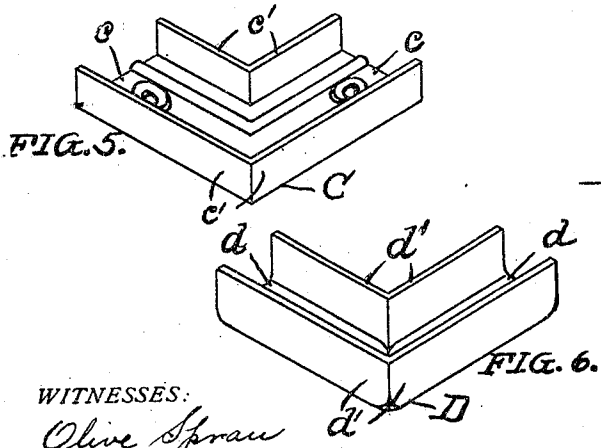


FIG. 5.

FIG. 6.

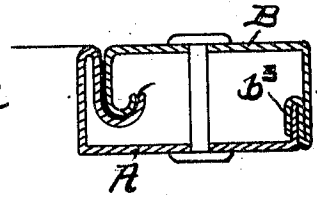


FIG. 10.

WITNESSES:

Olive Spraw

Arthur L. Bells

INVENTOR.

Eugene Feighery

By Brayton G. Richards

ATTORNEY.

UNITED STATES PATENT OFFICE.

EUGENE FEIGHERY, OF NEWPORT, KENTUCKY.

WINDOW-SCREEN.

No. 871,679. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed June 25, 1906. Serial No. 323,274.

To all whom it may concern:

Be it known that I, EUGENE FEIGHERY, a citizen of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

The object of my invention is to provide a window screen of improved construction and my invention consists in the combination and arrangement of parts hereinafter described and claimed.

In the drawings Figure 1 is an outside elevation of a screen embodying my invention; Fig. 2, an inside elevation of the same; Fig. 3, an enlarged section on line 3—3 of Fig. 1; Fig. 4, a section of the securing rivet; Fig. 5, a perspective view of the inside corner brace; Fig. 6, a perspective view of the outside corner brace; Fig. 7, a section showing a modified construction for securing the frame sections together; Fig. 8, a section on line 8—8 of Fig. 7; and Figs. 9 and 10, sections of modified forms of construction.

In the preferred construction the frame of the screen is formed of four metallic channel pieces A mitered at the corners to fit together in rectangular form. These channels are considerably wider than they are deep and have their outer and inner edges a and a' turned inwardly and then outwardly to form the lips a^2. A space a^3 is left between the inturned edges and the wall of the pieces A and the lip on the inner edges is made somewhat larger than the lip on the outer edges to accommodate the wire cloth. Locking pieces are formed of metallic channel pieces adapted to slip within the pieces A and mitered at the corners to fit together in rectangular form. The edges of locking pieces B are also turned inwardly and provided with lips b adapted to engage lips a^2 on pieces A. Corner braces C and D fit within pieces A and B at the corners and serve to stiffen the frame. The corner braces C consist of the angular plate c shaped to fit the contour of the backs of channel pieces A at the corners and are provided with continuous flanges c' adapted to fit into spaces a^3 in pieces A. The corner braces D consist of the angular plates d shaped to fit the contour of the backs of locking pieces B at the corners and are provided with continuous flanges d' adapted to fit into lips b on pieces B. Corner pieces E and F fit over the pieces A and B at the corners and serve to cover the miter joint and further secure the frame. If desired the corner pieces E and F may be let into pieces A and B so as to come flush with the general surfaces of those pieces, and thus form a frame with flush sides.

In constructing the frame, pieces A are slipped onto the corner braces C, thus bringing the open sides of their channels in substantially the same plane, or flush, with the wire cloth. The locking pieces B are then slipped onto the corner braces D to form a locking frame adapted to enter channels in pieces A. Then the wire cloth is stretched into place by pressing the locking pieces B into the pieces A. It will be seen that by this procedure the edges of the cloth will be drawn down into lips a^2 and its inner edge turned up against the edge of lips a^2 and secured by contact between the inner edges of lips b with those of lips a^2, thus stretching the cloth and securely locking it in position. The engagement between lips a^2 and b also serves to lock the pieces A and B together against spreading under the strain of the cloth. The frame is then further secured together by placing corner pieces E and F over pieces A and B at the corners and securing rivets G through all the parts on each side of the corner. During the riveting the spaces around the rivet holes are preferably countersunk to fit together to further secure the parts, as shown in Fig. 3. The rivets G are preferably made in the form shown in Fig. 4, with a shallow bore in their ends to form constant lengths of rivet lips g, so as to insure uniformity of rivet tension. Additional rivets G' are passed through pieces A and B between the corners at suitable intervals depending upon the size of the screen and suitable lifts and channel springs may be provided as desired. By this construction I provide a very rigid screen of simple and economical construction in which the wire cloth is tightly stretched and secured in position.

The frame may be readily rewired by removing the rivets G and G' when the new wire cloth is stretched and secured in position as before.

In Figs. 7 and 8, I have illustrated a modified form of construction for securing the parts together. Here a nut H carrying a metallic clip J having lips j engaging lips b is inserted in piece B and screw K passed through piece A into the nut.

Fig. 9 illustrates another modification in

which the edge of the wire cloth is bent up and secured between a bead a^4 in the back piece A and the lip b on the inner edge of piece B. In this case the pieces A and B are secured against spreading by a rivet G^2 passed through them sidewise. The inner corner of piece B is also beveled at b^2 to allow water to readily run off and not enter the frame.

Fig. 11 illustrates a modified form of construction in which the outer edge of piece B is provided with a different form of lip b^3 which engages the shortened outer edge of piece A to prevent spreading.

While I have illustrated and described the preferred constructions for carrying my invention into effect, this is capable of modification without departing from the spirit of the invention. I therefore do not wish to be limited to the exact construction shown in the drawings, but

What I claim as new and desire to secure by Letters Patent is:

1. In a window screen the combination of frame pieces consisting of metallic channels; wire securing pieces consisting of metallic channels adapted to enter the frame channels and draw the wire cloth therein; a member in each frame channel adapted to coöperate with an edge of the corresponding wire securing piece and secure the cloth thereto by turning it up over said edge; and means for securing the wire securing pieces in the frame channels, substantially as specified.

2. In a window screen, the combination of frame pieces consisting of metallic channels, said frame pieces being secured together with the open portion of the channels flush with the wire cloth; wire securing pieces adapted to enter the channels and provided with means for securing the wire cloth; and engaging members on the inner and outer walls of the channels, adapted to engage the wire securing pieces to prevent spreading of the channels, substantially as specified.

3. In a window screen, the combination of channel frame pieces A having their inner edges turned inwardly and provided with lips a^2; wire securing pieces B having their inner edges provided with lips b engaging lips a^2; and means for securing pieces A and B together, substantially as specified.

4. In a window screen, the combination of channel frame pieces A having both of their edges turned inwardly and provided with lips a^2; wire securing pieces B having both their edges provided with lips b engaging lips a^2; and means for securing piece B within pieces A, substantially as specified.

5. In a window screen, the combination of channel frame pieces A having inwardly turned edges to form spaces a^3, said edges being provided with lips a^2; wire securing pieces B having their edges provided with lips b engaging lips a^2; corner braces C and D having continuous flanges c' and d' entering spaces a^3 and engaging lips b respectively; and means for securing pieces B within channel pieces A, substantially as specified.

6. In a window screen, the combination of channel frame pieces A having inwardly turned edges to form spaces a^3, said edges being provided with lips a^2; wire securing pieces B having their edges provided with lips b engaging lips a^2; corner braces C and D having continuous flanges c' and d' entering spaces a^3 and engaging lips b respectively; and rivets G passing through the parts at the corners, substantially as specified.

7. In a window screen, the combination of channel frame pieces A having inwardly turned edges to form spaces a^3, said edges being provided with lips a^2; wire securing pieces B having their edges provided with lips b engaging lips a^2; corner braces C and D having continuous flanges c' and d' entering spaces a^3 and engaging lips b; and rivets G passing through the parts at the corners, said parts being countersunk together around the rivet holes, substantially as specified.

EUGENE FEIGHERY.

Witnesses:
ALBERT C. SCHNEIDER,
BRAYTON G. RICHARDS.