No. 855,250. PATENTED MAY 28. 1907.

W. KEMMERLING.

WINDOW SCREEN.

APPLICATION FILED MAY 29, 1906.

Fig. 1.

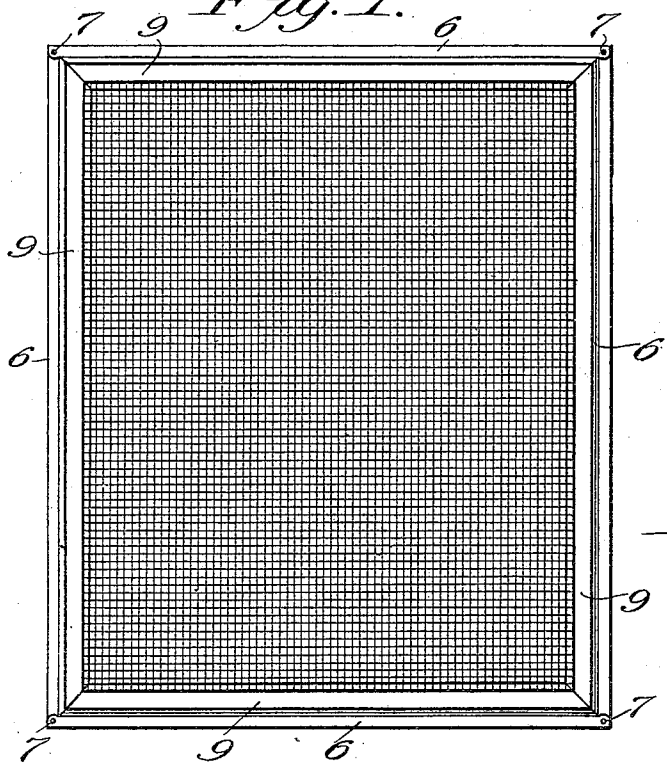


Fig. 2.

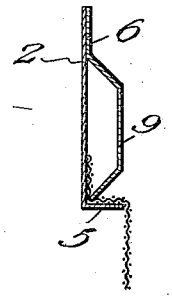


Fig. 3.

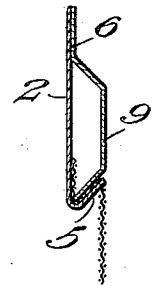


Fig. 4.

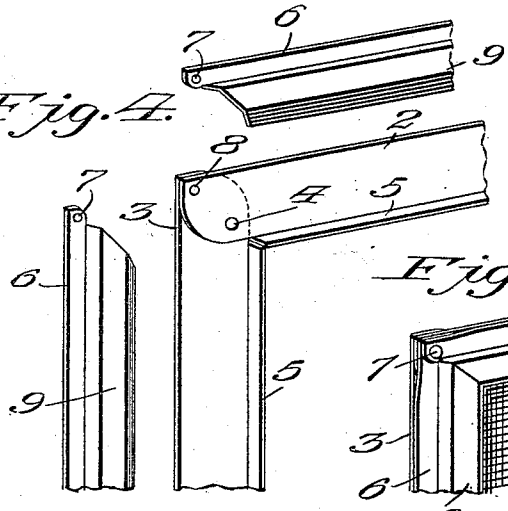


Fig. 5.

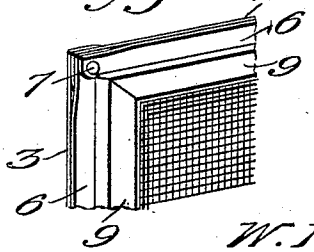
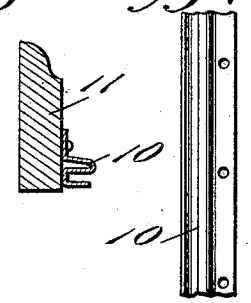


Fig. 6. Fig. 7.



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WARREN KEMMERLING, OF HITCHCOCK, TEXAS.

WINDOW-SCREEN.

No. 855,250. Specification of Letters Patent. Patented May 28, 1907.

Application filed May 29, 1906. Serial No. 319,401.

To all whom it may concern:

Be it known that I, WARREN KEMMERLING, a citizen of the United States, residing at Hitchcock, in the county of Galveston and State of Texas, have invented new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to window screens, and its primary object is to provide a novel and highly useful means for securing the screen material to the frame and for giving to the frame a neat and finished appearance.

A further object is to provide means by which the screen material may be stretched taut after it has been secured to the frame.

A further object is to provide a frame embodying a construction which will permit the screen material to be stretched taut after it has been secured to the frame.

A still further object is to provide a window screen and securing means which are simple and durable and which may be manufactured and sold at a comparatively low cost.

With the above and other objects in view, the invention consists of the construction, combination and arrangement of parts hereinafter fully described, claimed and illustrated in the accompanying drawings, wherein:

Figure 1 is a front elevation of a window screen constructed in accordance with my invention. Fig. 2 is a transverse section through one of the rails of the window screen, illustrating the manner in which the screen material is secured to the frame, that portion of the frame which is adapted to stretch the screen material taut after the securing means has been secured to the frame being illustrated in position to permit this operation. Fig. 3 is a view similar to Fig. 2, illustrating the portion of the frame just referred to in position after it has been bent to stretch the screen material taut. Fig. 4 is a detail perspective of one corner of the frame and securing means. Fig. 5 is a detail perspective of one corner of the complete window screen. Fig. 6 is a transverse section through one of the blind stops, illustrating the manner in which the guides are secured to the stops, and Fig. 7 is a front elevation of a fragmentary portion of one of the guides.

Referring to the drawings by reference numerals, and particularly to Fig. 4, 2 designates the top and 3 the side rails of the window screen frame, it being understood, of course, that the frame comprises two top rails and two side rails. These rails are constructed of galvanized sheet metal disposed in endwise relation and overlapping each other at their ends. The rails are secured together by means of bolts or rivets passing through openings 4, and each rail is extended transversely at a point between the opposing edges of the other rails, which extended portion is disposed to provide flanges 5 which project at right angles to the plane of the frame. The flanges 5 form a part of the means by which the screen material is secured to the frame and by which the screen material is stretched taut after it has been secured to the frame. The screen material 6 is stretched over the frame beyond the flanges 5.

The means for securing the screen material to the frame comprises bars 6^a, which also are made of galvanized sheet metal, disposed in endwise relation and overlap each other at their ends. The bars 6^a are secured to the frame by bolts or rivets passing through openings 7 in the ends of the bars 6^a and openings 8 in the rails of the frame, said bolts also preventing the rails of the frame from having any relative movements. Each of the bars 6^a is extended transversely intermediate the opposing edges of any two bars and this extended portion provides a locking flange 9, which is provided with a lower inclined portion, the edge of which engages the screen material and secures the same firmly to the frame. The lower edges of the inclined portions of the locking flanges 9 engage the screen material and impinge it against the frame at the points of juncture of the rails and flanges thereof. Those portions of the locking flanges 9 between their inclined portions and the bars 6 may be curved or angular in transverse section to give the frame a neat and finished appearance, as fully illustrated in Figs. 1 and 5 of the drawings. After the screen material has been thus secured to the frame, the flanges 5 are bent upwardly into engagement with the inclined portions of the locking flanges 9 to stretch the screen material taut and to also prevent it from becoming accidentally disengaged at any point where it is secured to the frame.

The window screen is adapted to be slidably mounted in guides 10 secured to the blind stops 11 of the window frame, the side rails 3 and the bars 6^a which are secured thereto being mounted in the guides.

The manner in which the screen may be secured to the frame may be stated to be as follows: The rails of the frame having been assembled and secured together by bolts or rivets passing through the openings 4, the screen is stretched over the flanges 5, after which the bars 6^a are secured to the rails of the frame by bolts or rivets through the openings 7 and 8. The application of the bars 6^a impinges the screen between the edges of the inclined portions of the locking flanges 9 and the frame at the points of juncture of the rails and flanges of the frame, and in view thereof prevent the screen material from becoming accidentally disengaged from the frame. After the screen material has been thus secured to the frame, the flanges 5 are bent upward into engagement with the locking flanges 9 to stretch the screen material taut and also to prevent the same from becoming accidentally disengaged from the frame.

From the foregoing description taken in connection with the accompanying drawings, the construction and mode of operation of the invention will be understood without a further extended description.

Changes in the form, proportions and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

Having fully described and illustrated my invention, what I claim is:

1. A window screen comprising a frame provided with flanges arranged at right angles to the plane thereof, screen material applied to the frame over the flanges, and bars secured to the frame and provided with locking flanges having inclined portions terminally engaging the screen material and impinging it against the frame, the flanges of the frame being adapted to be bent into engagement with said inclined portions to stretch the screen material.

2. A window screen comprising a frame provided with a flange arranged at right angle to the plane thereof, screen material applied to the frame over the flange, and means secured to the frame and provided with an inclined portion terminally engaging the screen material and impinging it against the frame, the flange being adapted to be bent into engagement with the inclined portion to stretch the screen material.

3. A window screen comprising a frame provided with a flange, screen material applied to the frame over the flange, and means secured to the frame and provided with an inclined portion terminally engaging the screen material and impinging it against the frame, the flange being adapted to be bent into engagement with the inclined portion to stretch the screen material.

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

WARREN KEMMERLING.

Witnesses:

GEO. SCHNEIDER,

R. B. GARNETT.