F. L. RICKER.

WINDOW SCREEN.

APPLICATION FILED OCT. 24, 1913.

1,200,987. Patented Oct. 10, 1916.

Fig. 2.

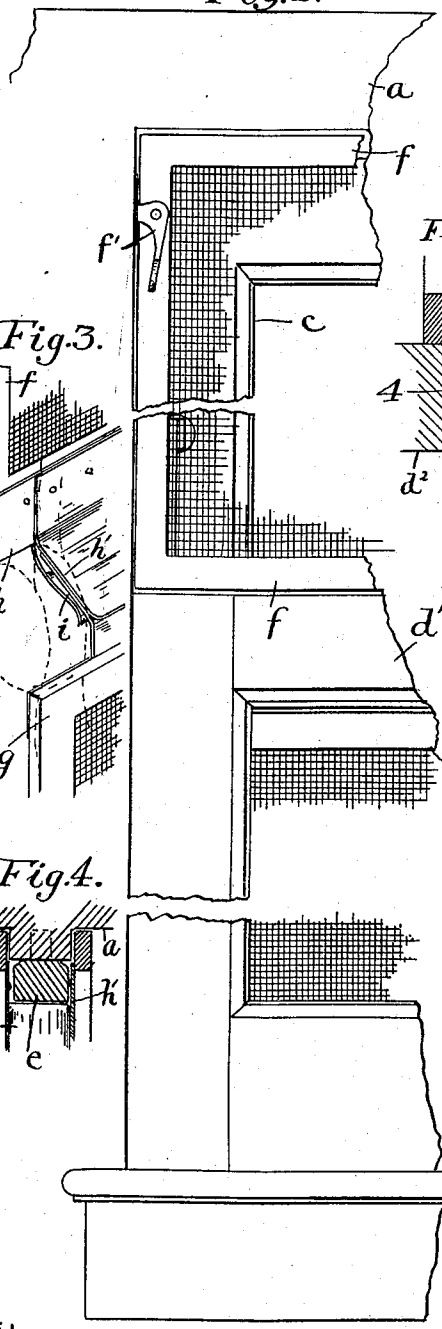


Fig. 3.

Fig. 4.

Fig. 5.

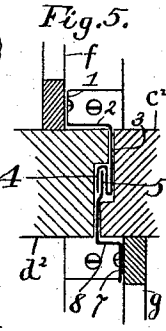
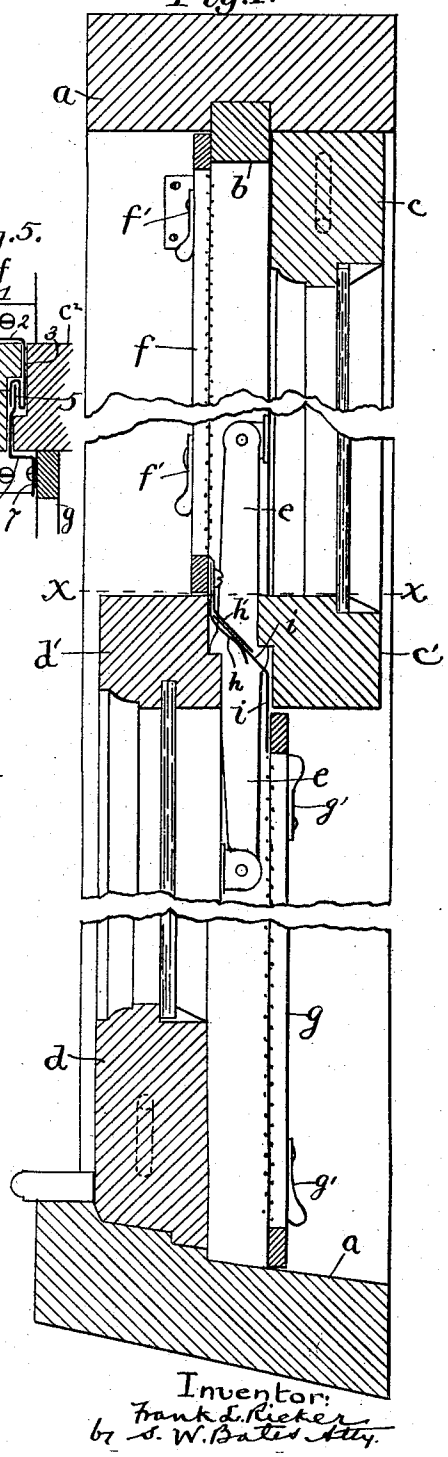


Fig. 1.



Witnesses:

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Inventor:

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by S. W. Bates Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK L. RICKER, OF PORTLAND, MAINE, ASSIGNOR TO AUSTRAL WINDOW COMPANY, OF NEW YORK, N. Y., A CORPORATION OF MAINE.

WINDOW-SCREEN.

1,200,987. Specification of Letters Patent. Patented Oct. 10, 1916.

Application filed October 24, 1913. Serial No. 796,987.

To all whom it may concern:

Be it known that I, FRANK L. RICKER, of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to window screens and it relates particularly to screens adapted to be used on the so-called "Austral" or balance sash windows. These windows are illustrated in United States Letters Patent No. 821,510 issued May 22, 1906 and they consist of an upper and lower sash with the usual meeting rails, the lower portion of the upper sash and the upper portion of the lower sash being pivoted at a point a short distance from the end to the ends of a pair of centrally pivoted balance levers which in turn are pivoted to the parting strip. The upper end of the upper sash and the lower end of the lower sash are pivoted in a vertical slot in the casing so that they are capable of vertical movement. As a result of this construction the upper end of the lower sash may be swung inwardly and the lower end of the upper sash outwardly at the same time opening a space at the top and bottom of the window. These windows while they have gone into extensive use have always been difficult to screen.

The objects of my invention are to devise a screen which will perfectly close the window opening whether the sash are opened or closed, which may easily be applied to any window of this character, which will present a neat and attractive appearance and which will cut off as little of the air supply as possible. These objects I accomplish by means of the window screen hereinafter described and claimed.

My invention may best be understood by means of the accompanying drawings in which is illustrated one practical form of my invention although it is to be understood that it may be embodied in other forms without departing from the construction defined in the claims.

Referring to the drawings, Figure 1 is a central vertical section through one of the "Austral" windows showing one set of the screens in position. Fig. 2 is an elevation looking from the inside of the window. Fig. 3 is a perspective detail showing the manner of connecting the upper and lower screens, Fig. 4 is a section on the line x—x of Fig. 1, and Fig. 5 is a vertical section showing a modification.

Referring to the drawing, a represents the window casing, b is the parting strip, c the upper sash, d the lower sash and c' and d' the meeting rails. The upper and lower sashes are connected with the casing by means of a pin and vertical slot connection as indicated by dotted lines in Fig. 1. This enables them to slide vertically in the casing a limited distance. The balance levers e are pivoted to the parting strip and to the upper and lower sash. As here shown, the lever e is formed flush on the inner surface and it has a hub or enlargement in the center and a pivot on the outside which extends into the parting strip. (See Fig. 4). In screening this window I make use of an upper and a lower screen each approximately the size of its corresponding sash. The upper screen fits in the casing above the lower sash and against the inner face of the parting strip. The lower screen fits the casing and outer surface of the parting strip. In other words each screen fits against the face of the parting strip opposite the sash.

As here shown, the upper screen f fits against the face of the parting strip opposite the sash c and the lower screen g fits the face of the parting strip opposite the sash d. The screens are fastened in place by dogs f', g' which engage recesses in the sides of the casing in the well known manner. The screens which are on opposite sides of the parting strip are connected by a connecting portion which extends through a space or opening formed between the meeting rails and makes with the screens a complete closure of the window opening. The connecting portion which joins the screens is preferably made separable so that the screens may be detached from each other and I prefer to form an interlocking separable joint within the opening.

As here shown, the upper screen is provided with two thin strips preferably of metal superposed on one another and each bent at an agle to form an upper vertical portion which is attached to the lower end of the screen and a flat socket or recess extending obliquely downward. This socket or recess extends substantially the entire width of the screen but it is cut away at the ends to embrace the hub of the lever e

as shown in Figs. 3 and 4. On the upper edge of the lower screen is a thin strip *i* bent at an angle to form a vertical portion secured to the upper end of the lower screen and an inclined portion extending diagonally upward and engaging the socket formed by the strips *h* and *h'*. The lower strip *h* is bent so as to give a flaring opening to the lower end of the socket into which the strip *i* will readily slide. The joint thus made is easily put together and taken apart and it makes a tight joint which effectually excludes rain, snow and air when the window is closed. The screens I have illustrated are metal screens but wood screens may be applied in identically the same manner to these windows. When the screens are removed from the windows the opening between the meeting rails may be filled by a filling piece which may be secured in place in any suitable manner. Screens applied in this manner to this class of windows have the advantage of making a tight joint with the face of the parting strip and with the inner surface of the casing they offer a minimum obstruction to the admission of air when the window is open. The windows may be freely opened and closed without interfering with the screens and they involve little or no change in the construction of the window. Other separable joints differing from the one here shown may be used but this joint has many practical advantages, especially when used with metal screens.

Instead of having an opening between the meeting rails they may be made to fit closely around the connecting piece. In Fig. 5 I have shown such a modification in which c^2 and d^2 are the meeting rails. The upper section of the connecting piece is composed of a metal strip bent to form a vertical flange 1 secured to the upper screen *f*. The strip then makes a horizontal bend 2, then a downward vertical bend 3 and thence vertically upward and returning downward forming a downwardly opening socket 4. The lower section is bent to form a vertical flange 7 which is secured to the lower screen *g*, thence it is bent to form a horizontal bend 8 and thence it bends upward to form a tongue 5 which enters the socket 4. The meeting rails are so formed as to shut closely around this joint so as to make a tight connection between the meeting rails. The two sections of this connecting piece may be easily separated by pulling them apart.

I claim:—

1. The combination with a window of the character described having an upper and lower sash and parting strip, the meeting rails of said sash being separated by an intervening space or opening, of an upper and lower screen, each fitting against the face of the parting strip opposite the corresponding sash, the adjacent edges of said screens being joined by a connecting portion extending through said opening.

2. The combination with a window of the character described having an upper and lower sash and parting strip, the meeting rails of said sash being separated by an intervening space or opening, of an upper and lower screen each fitting against the face of the parting strip opposite the corresponding sash, the adjacent edges of said screens being joined by a separable connecting portion extending through said opening.

3. The combination with a window of the character described having an upper and lower sash and parting strip, the meeting rails of said sash being separated by an intervening space or opening, of an upper and lower screen each fitting against the face of the parting strip opposite the corresponding sash, the adjacent edges of said screen being joined by a connecting portion, forming a separable joint within said opening.

4. The combination with a window of the character described having an upper and lower sash and parting strip, the meeting rails of said sash being separated by an intervening space or opening, of an upper and lower screen each fitting against the face of the parting strip opposite the corresponding sash, one of the adjacent edges of said screens being provided with a pair of superposed thin strips extending into said space and positioned face to face to form a socket and the other edge being provided with a corresponding strip adapted to engage said socket.

5. The combination with a window of the character described having an upper and lower sash and parting strip, the meeting rails of said sash being separated by an intervening space or opening, of an upper and lower screen each fitting against the face of the parting strip opposite the corresponding sash, one of the adjacent edges of said screens being provided with a pair of superposed thin strips bent at an angle to form a vertical portion and an inclined portion constituting a socket or recess within said space, the other adjacent edge being provided with a corresponding strip adapted to fit within said socket or recess.

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

FRANK L. RICKER.

Witnesses:
S. W. Bates,
Cora B. Creighton.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."