2 Sheets—Sheet 1.

R. J. STUART.

Window Screen.

No. 201,714. Patented March 26, 1878.

Fig. 1.

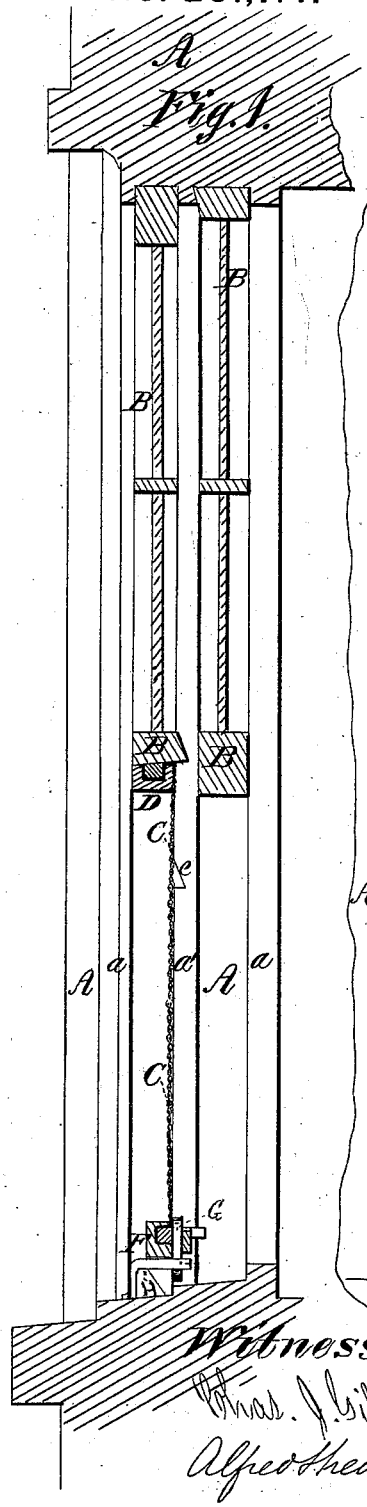


Fig. 2.

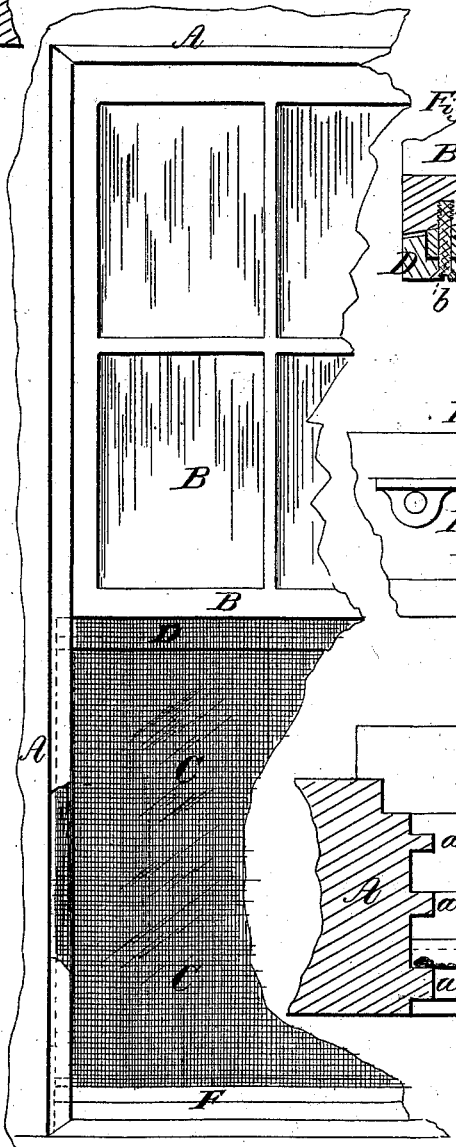


Fig. 5.

Fig. 6.

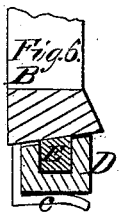


Fig. 7.

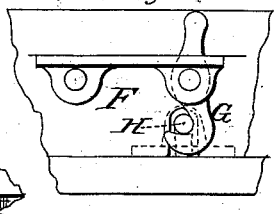


Fig. 8.

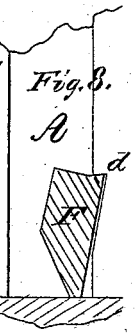
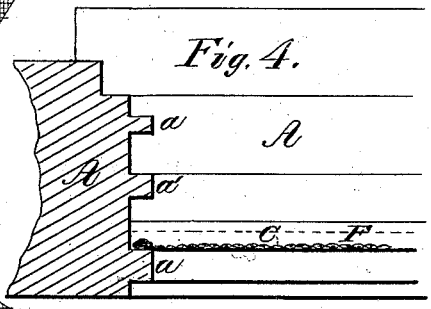


Fig. 4.



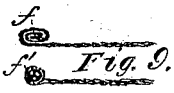


Fig. 9.

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Alfred Shedlock

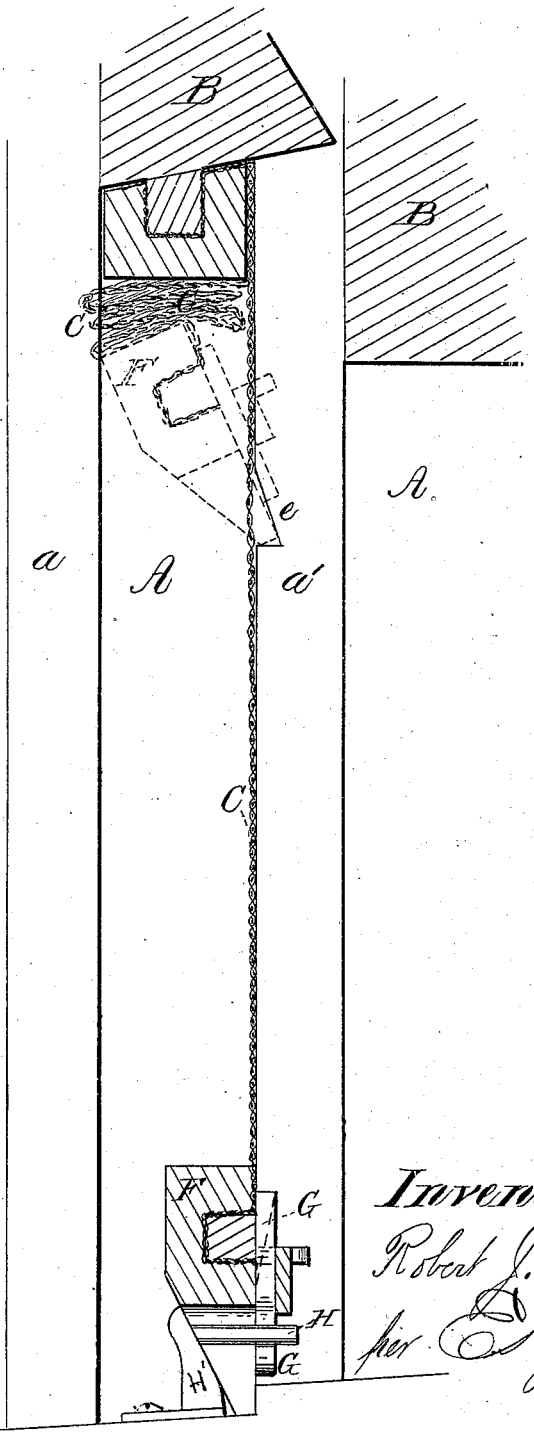
Inventor
Robert J. Stuart
per E. N. Johnson.
Attorney.

2 Sheets—Sheet 2.

R. J. STUART.
Window Screen.

No. 201,714. Patented March 26, 1878.

Fig. 3.



Witnesses.
Chas. J. Gilmore.
Alfred Sheblock.

Inventor.
Robert J. Stuart
per D. N. Johnson.
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UNITED STATES PATENT OFFICE.

ROBERT J. STUART, OF YONKERS, NEW YORK.

IMPROVEMENT IN WINDOW-SCREENS.

Specification forming part of Letters Patent No. **201,714**, dated March 26, 1878; application filed September 1, 1877.

To all whom it may concern:

Be it known that I, ROBERT J. STUART, of Yonkers, county of Westchester, and State of New York, have invented certain Improvements in Window-Screens, of which the following is a specification:

My invention relates to screens to be applied to windows for excluding dust, insects, &c., from houses. Its objects are to facilitate the manipulation of such screens, and render the same capable of being readily elevated without removing them from the sash, and to improve them in other respects, as will be fully hereinafter set forth.

My invention consists, first, in a curtain, of netting, gauze, or other suitable material, of the width of the window, attached to the rail of the sash, in combination with a device or devices for keeping such curtain extended over the space to be covered by it; secondly, of a curtain, of netting, gauze, or other suitable material, secured by one edge to the rail of the sash, and having attached to its opposite edge a bar or rod of the width of the window, which bar is capable of being raised and lowered, and is guided between the beading-strips of the window-frame; thirdly, of the means of retaining in its position, when raised, the bar at the lower edge of the curtain-screen; fourthly, of the means for holding the curtain-screen extended over the space to be covered by it; and it further consists in sundry other improvements in the construction, combination, and operation of the parts, as will be fully hereinafter set forth and specified.

Figure 1 is a vertical section of a window frame and sashes with my improvements thereto attached. Fig. 2 is a front elevation of one side of the same. Fig. 3 is an enlarged view of a sash rail and frame, showing fully the operation of my improvements in screens. Fig. 4 is a horizontal section of one side of the window-frame. Figs. 5, 6, 7, 8, and 9 are views in detail.

Similar letters of reference indicate like parts in all the figures.

A represents the frame of the window, provided with the usual guide-beads *a a'*, for guiding the movement of the sashes, represented by B. C is the curtain-screen, consisting of netting, gauze, or other suitable material. This curtain is just the width between the sides of the window-frame, and is attached by its upper edge to the lower bar of the outer sash by means of the devices shown in transverse section in Fig. 5. These devices consist of a bar, D, having a groove cut in one of its sides, into which groove the strip E fits.

In fastening the material to the rail of the sash, it is laid over the groove in the bar D, and the strip E is forced into the groove, the material being thereby clamped between the sides of the groove and those of the strip E. The bar and strip are then screwed onto the sash-rail, the screw *b* passing through the bar and strip and clamping the latter against the sash-rail, as shown, thereby precluding all possibility of the netting becoming loose.

In Fig. 6 is shown another method of securing the bar to the sash-rail where screws are objectionable, which consists of staples or clamps *c*, between which and the sash-rail the bar is forced; and it will be observed that, as in Fig. 5, there would be no possibility of the strip E becoming loose in its groove, as it is clamped against the sash-rail.

F is a bar attached to the lower edge of the curtain-screen, either by tacking or by the method above described. This bar is of a length equal to the width between the sides of the window-frame, and is retained in its position as regards lateral movement by means of the beads *a a'* of the window-frame. Its ends are free, and it may be moved up and down or taken out from between the beading-strips by tilting it in a vertical plane, so as to allow of its removal laterally. It may be of such a weight as to keep the curtain-screen properly distended by the action of gravity; but for stretching the curtain I prefer employing positive devices to hold the bar down and keep the curtain distended. Such devices are shown in Figs 7 and 8.

Fig. 7 is a front elevation of a catch, consisting of a hook, G, which is attached to the bar F, and engages a pin, H, which projects from a short standard, H', secured to the window-sill, thus keeping the bar down and the curtain-screen properly stretched, the bar F being held between the stop-beads of the window-frame and the standard H', thus preventing any lateral movement in said bar.

In Fig. 8 is shown another means for effecting the same object. In this instance the bead on each side of the window-frame is notched, as shown at *d*, Fig. 8, and the edge of the bar slipped under the shoulder of said notch, thereby holding it (the bar) down. The bar F is less in thickness than the width between the beads *a a'*, and thus can rock between them—that is, from one bead to the other.

e, Figs. 1 and 3, is a notch cut in the bead *a'*, for retaining, when elevated to that point, the bar F, the lower edge of which rests on the shoulder of the notch, while the top edge rests against the other bead, as shown at Fig. 3.

As the side edges of the curtain-screen are generally not selvaged, it is necessary to support it at these edges, or otherwise it would, from repeated stretching, become baggy and loose. I therefore remove the strain on the edges by rolling the same, as shown at *f*, Fig. 9, or have a cord, *f'*, extending from the upper to the lower bar, for receiving any great strain in stretching the screen.

Fig. 3 shows, in dotted lines, the screen and bar raised, the latter resting in the before-described notch.

The operation of the devices will be evident from the foregoing description.

It is obvious that, instead of being attached to the sash-rail, the screen may be supported at its upper edge to a stationary bar extending from one side of the window-frame to the other.

I claim—

1. In combination with a window-sash, a curtain-screen, of netting, gauze, or other suitable material, of the width of the window, attached to the lower bar of the upper or outer sash, and provided at its lower edge with a bar, F, and latch G, for keeping it (the curtain) properly extended over the space to be covered by the same, constructed and operating substantially in the manner described and specified.

2. In combination with the window-sash, a curtain-screen, of netting, gauze, or other suitable material, of the width of the window, attached to the rail of the sash by one edge, and having at the opposite edge a bar, F, extending across the window and guided between the beading of the window-frame, constructed and operating substantially in the manner described and specified.

3. The combination, with the netting or gauze screen B and bar F, of the latch G and pin H, standard H', and stop-bead *a*, constructed and operating substantially in the manner described and specified.

4. The combination, with the beading-strips *a a'*, one of which, *a'*, is notched, as described, of the bar F, of a thickness less than the space between the beading-strips, whereby, when its lower edge is supported by the shoulder of the notch, its upper edge may incline and rest against the other bead, constructed and operating substantially in the manner described and specified.

ROBERT J. STUART.

Witnesses:

CHAS. J. GILMORE,

ALFRED SHEDLOCK.