No. 638,517. Patented Dec. 5, 1899.

D. B. LONGWILL.

WINDOW SCREEN.

(Application filed Oct. 7, 1899.)

(No Model.)

Fig. 1.

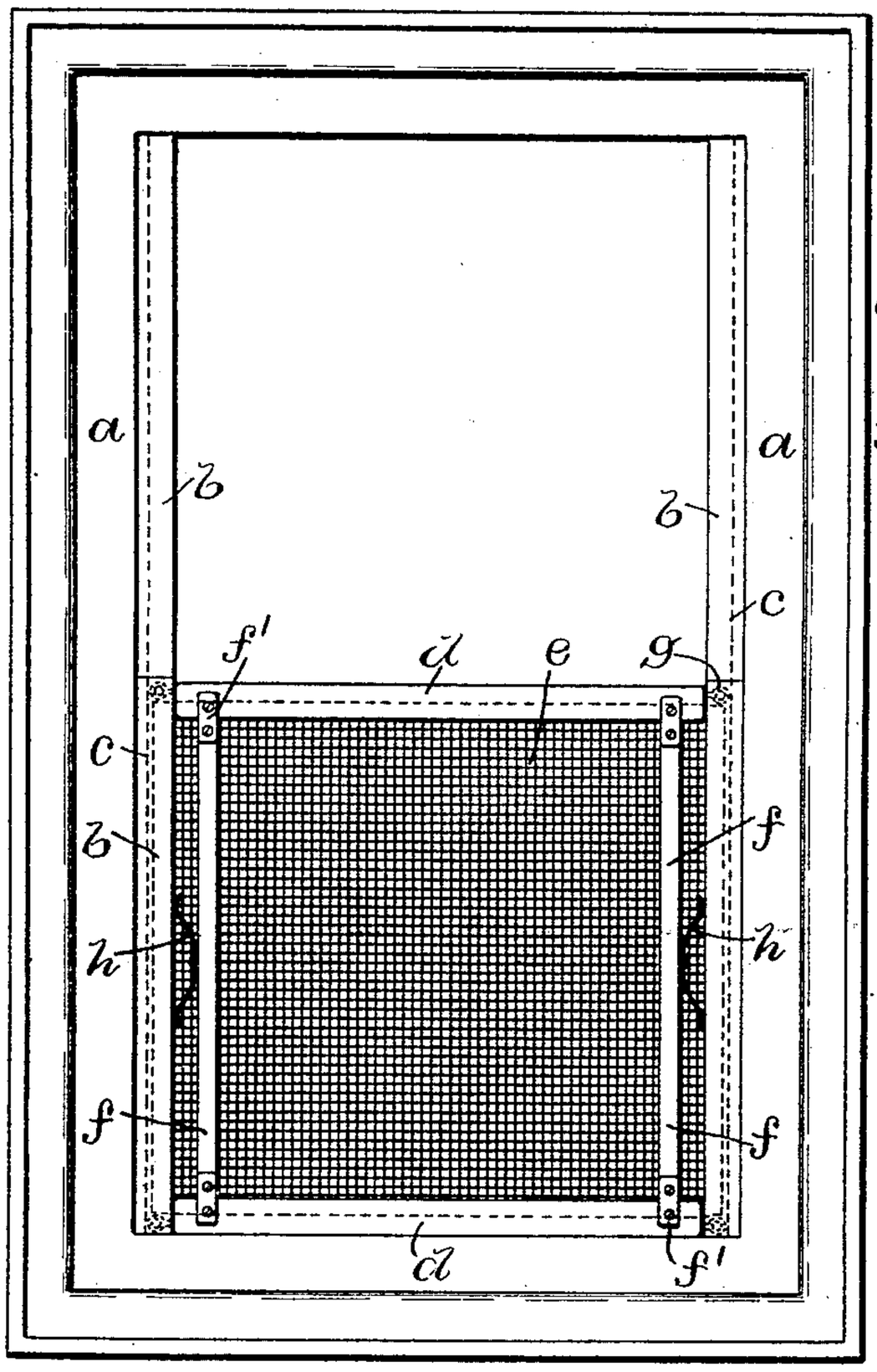


Fig. 2.

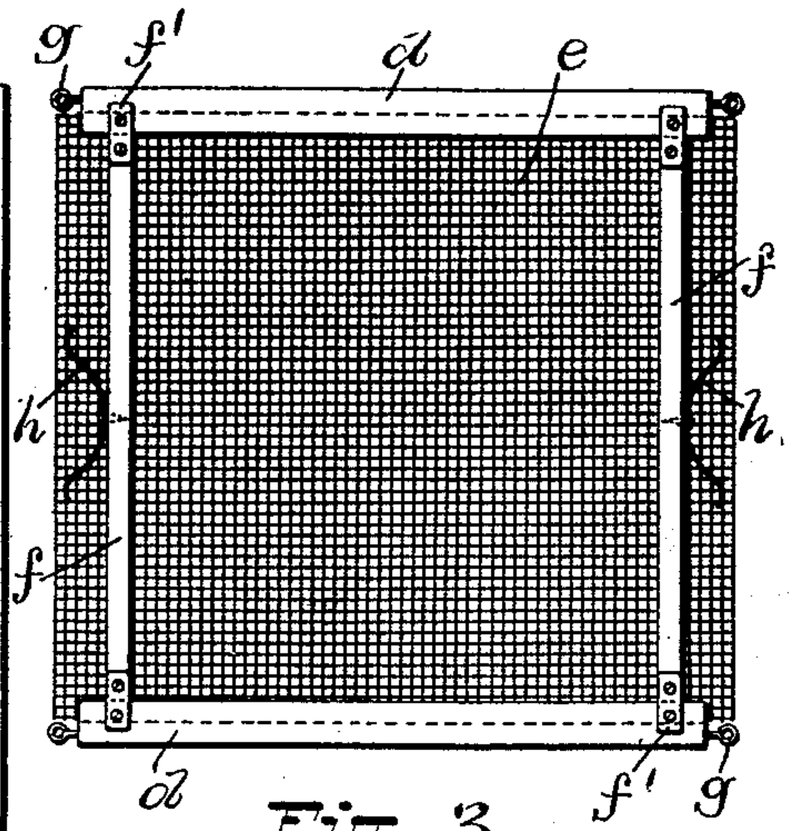


Fig. 3.

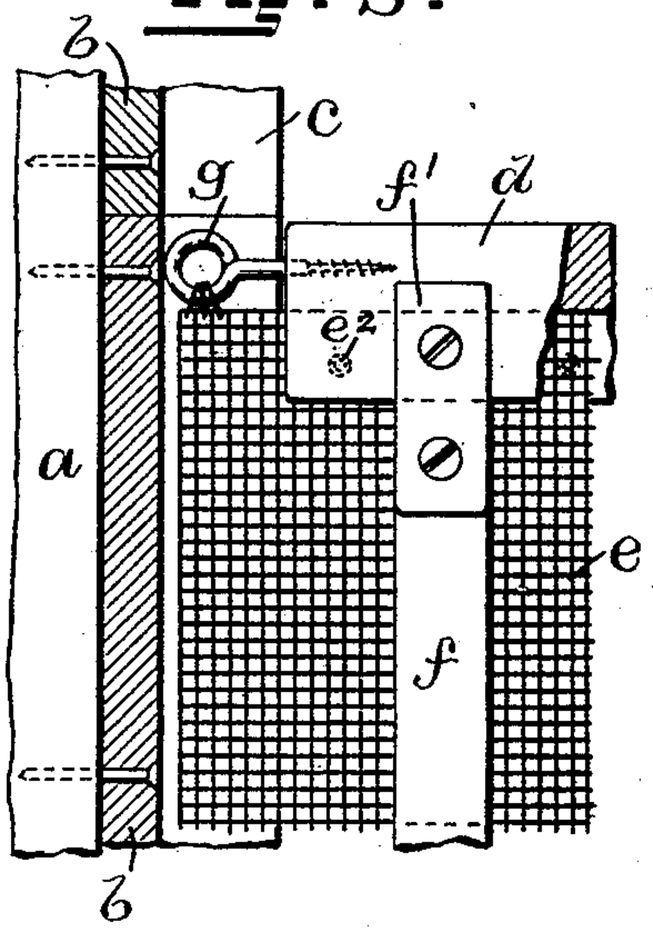


Fig. 4.

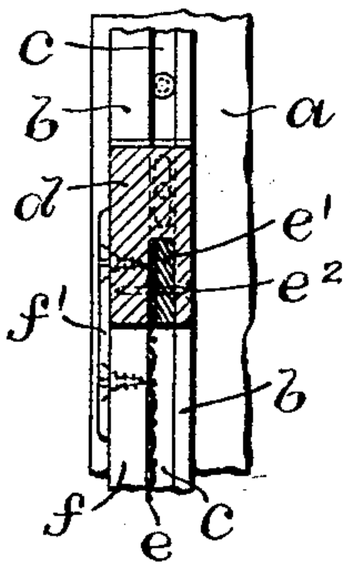
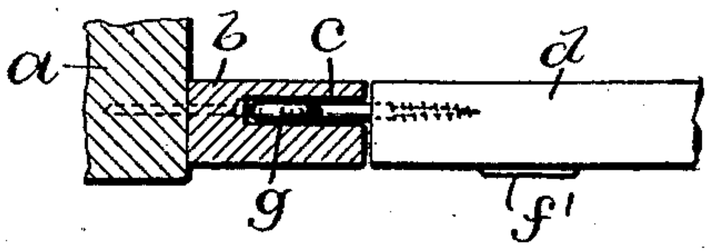


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DAVID B. LONGWILL, OF PROVIDENCE, RHODE ISLAND.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 638,517, dated December 5, 1899.

Application filed October 7, 1899. Serial No. 732,863. (No model.)

To all whom it may concern:

Be it known that I, DAVID B. LONGWILL, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Window-Screens, of which the following is a specification.

This invention has reference to an improvement in window-screens.

One object of the invention is to so construct a screen that the same may be packed into a comparatively small parcel for storage or transportation.

Another object of the invention is to permit of the ready adjustment of the screen to the variations in the width of window-frames of the usual standard sizes.

To these ends the invention consists in the peculiar and novel construction whereby the screen may be readily taken apart or adjusted to the window-frame, as will be more fully set forth hereinafter.

Figure 1 is a front view of a window-frame provided with my improved screen. Fig. 2 is a front view of the detached screen. Fig. 3 is a view of part of the screen, showing the same in connection with the guide-rail, which is partly shown in section. Fig. 4 is a transverse sectional view of part of the screen, showing the connection of the stretch-bar to the end rail and the manner of securing the wire-cloth in the end rail. Fig. 5 is a horizontal section of the guideway and frame, showing the connection of the screen with the same.

In the drawings, *a a* indicate the vertical sides of the window-frame, and *b b* the vertical guide-rails for the screen, secured to the vertical sides *a a*. The guide-rails are preferably made each of two lengths for convenience in packing and transportation. *c c* are grooves in the guide-rails. These grooves are made of sufficient depth so as to permit of the adjustment of the screen to the variations in width of window-frames of normal standard sizes. The grooved guide-rails may be readily secured to the window-frame by means of wire or other nails, as is shown in Figs. 3 and 5. The end rails *d d* are grooved longitudinally to receive the wire-cloth *e*, which is secured in the grooves of the upper and lower end rails *d d* by the battens *e' e'*, forced into the groove on one side of the wire-cloth and secured by the nails or pins e^2. To hold the wire-cloth *e* in the flat and stretched position, the stretch-bars *f f* are placed between the upper and lower end rails *d d*, and the plates *f' f'* are secured by screws to the adjacent parts of the stretch-bar and the end rails. The screw-threaded eyebolts *g* are screwed into the ends of the end bars *d d*. They extend into the grooves *c c* in the vertical guide-rails *b b*. These eyebolts, of which there are four in a screen, form positive and reliable guides for the screen, which may be readily adjusted to ordinary variations in width. The portion of the wire-cloth extending into the grooves *c c* may be tied to the eyebolts, as is indicated in Fig. 3.

To support the screen in a raised position, the springs *h h* are secured to the stretch-bars *f f*, so as to bear against the vertical guide-rails *b b* and hold the screen in the raised position by frictional contact with the vertical guide-rails. In securing the stretch-bars to the end rails the springs *h h* may be adjusted to secure the frictional resistance desired.

The screen may be transported packed in a small parcel. When it is to be applied to a window, the two lower lengths of the vertical guide-rails are first secured to the opposite sides of the window-frame. The wire-cloth may now be secured to the end rails, or it may have been previously secured. The eyebolts are now turned to adjust them to the guide-rails, the stretch-bars are secured to the end rails, so that the springs *h h* bear on the vertical guide-rails, and then the two upper lengths of the vertical guide-rails are secured. All this can be readily done by any one that can drive a nail or a screw. The removal is as easily effected, and the screens, usually removed during the winter, may be knocked down and packed in a small space for storage.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a window-screen, the combination with the grooved vertical guide-rails, of the upper and lower end rails, guided in the grooves of the guide-rails, the wire-cloth secured to the end rails, adjustable guides secured to the ends of the upper and lower end rails and extending into the grooves of the guide-rails,

the stretch-bars, means for securing the stretch-bars to the end bars, and springs secured to the stretch-bars, as described.

2. In a knockdown window-screen, the combination with the vertical guide-rails, each made in two lengths, of the grooved end bars, the eyebolts in the ends of the end bars, the stretch-bars, the plates *f' f'* secured to stretch-bars and the end bars, and the springs *h h* bearing on the vertical guide-bars, as described.

3. In a window-screen, the combination with the grooved end bars, and the battens securing the wire-cloth in the end bars, of the wire-cloth *e* extending on the opposite sides beyond the ends of the end bars, stretch-bars extending from one end bar to the other, and the eyebolts *g g* secured by screw-thread engagement in the ends of the end bars; whereby the screen may be adjusted to fit the grooved guide-bars of the window-frames, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID B. LONGWILL.

Witnesses:

J. A. MILLER, Jr.,

B. M. SIMMS.