

(No Model.)

I. E. PALMER.
WINDOW SCREEN.

No. 269,452.

Patented Dec. 19, 1882

Fig. 2

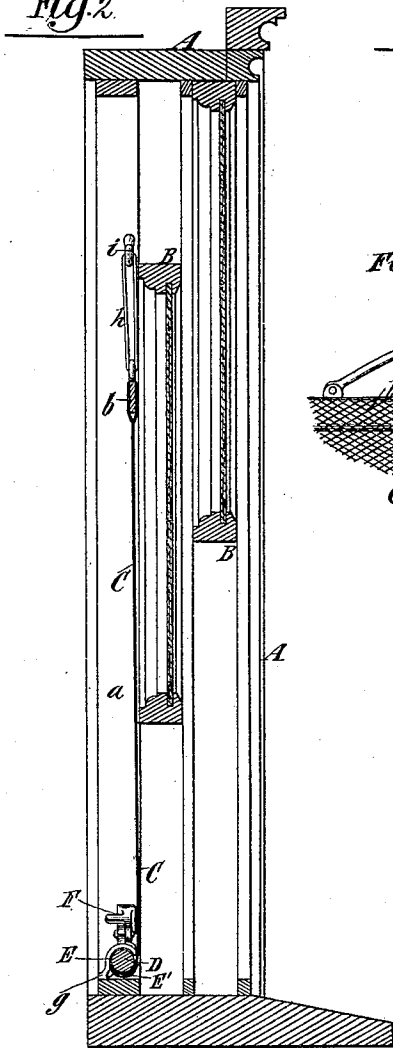


Fig. 1

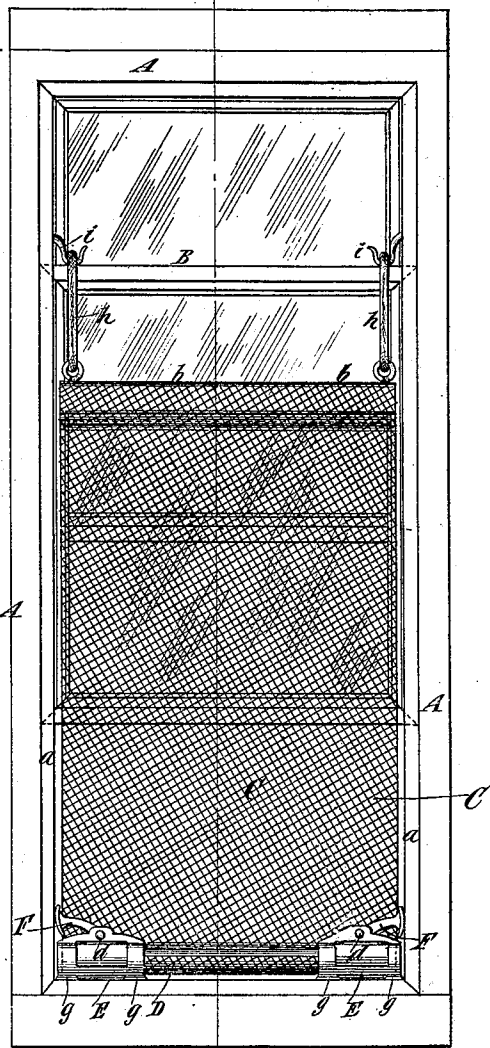


Fig. 5

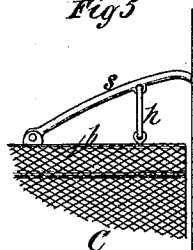
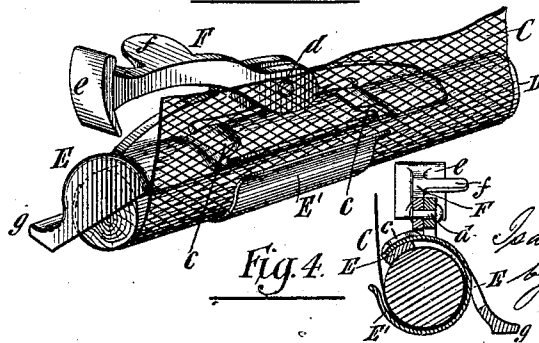


Fig. 3



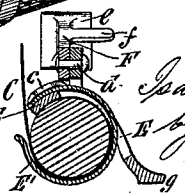
Witnesses:-

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Fig. 4



UNITED STATES PATENT OFFICE.

ISAAC E. PALMER, OF MIDDLETOWN, CONNECTICUT.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 269,452, dated December 19, 1882.

Application filed December 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, ISAAC E. PALMER, of Middletown, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Window Screens and Shades, of which the following is a specification.

My invention relates to that class of window screens or shades which are severally composed of a piece of mosquito-netting or other fabric and rollers or bars attached thereto for readily applying it to and removing it from a window.

The invention consists in the combination, with a screen or shade, of a roller or bar attached to one end thereof and adapted to enter between the sides of and extend across the sash to a window-casing, and a clamp or clamps attached to the end or ends of said roller or bar and adapted to be pushed downward independently of said roller or bar, after the latter is in place, so as to wedge against the side or sides of the window-casing, and so that any upward movement of said roller or bar will tighten said clamp or clamps. The clamps may be secured upon the roller or bar by a spring-clasp, so that they may be adjusted or placed upon the roller or bar after it is cut to a proper length to enter between the sides of the casing, and the said clasps may form parts of sockets which are adapted to fit over the ends of the roller or bar, as hereinafter particularly described.

The invention also consists in the combination, with a screen or shade, of a roller or bar attached to one end thereof and adapted to enter and be secured between the sides of a window-casing, and springs for attaching the other end thereof to said casing, so that the screen or shade can be put under tension in the act of securing the roller or bar in the window-casing, and the springs will keep the screen or shade under tension to stretch it tightly over the window. These springs may consist of ordinary rubber bands or straps attached to the window-casing by hooks or otherwise, as hereinafter fully described.

In the accompanying drawings, Figure 1 represents an elevation of the inside of a window having my improved screen applied thereto. Fig. 2 represents a vertical section

on the dotted line *x x*, Fig. 1. Fig. 3 represents a perspective view, upon a larger scale, of the end portion of the roller or bar which is attached to the screen, a portion of the screen, and one of the clamps with its socket. Fig. 4 represents a transverse section of said roller or bar and socket, and Fig. 5 is a detail view of a device of novel form for holding the upper end of the screen or shade.

Similar letters of reference designate corresponding parts in all the figures.

A designates a window-casing, and B the sashes thereof.

C designates a screen of mosquito netting, wire-gauze, or other suitable material; but in lieu of the screen a shade or curtain of any proper material may be employed and secured in the same manner. A simple piece of mosquito-netting, cut to a proper width to fit snugly between the stop-beads *a* of the casing and long enough to reach above the meeting-rails of the two sashes, may constitute the screen.

To the upper end of the screen C may be fastened a strip or bar, *b*, and to the lower end of said screen is fastened a roller or bar, D, which is as long as the screen is wide, so that it also will enter between the stop-beads *a*. Both the strip *b* and the roller or bar D may be made and sold in long pieces and then cut to proper lengths to suit window-casings of different widths.

The screen may be folded around the bar *b* and serve to form a pocket; and the lower end of the screen may be clamped in a longitudinal groove in the roller or bar D by means of a strip fitting therein, or secured in any other suitable manner. On each end of the roller or bar D, after it is cut to proper length to suit the window-casing, is placed a socket, E, which is partially closed at the ends, so that said ends will strike against the ends of the roller or bar, as seen in Fig. 3, and form stops for preventing the sockets from being slipped too far on the roller or bar.

Each of the sockets E is composed, as here represented, of a casting adapted to partly surround the roller or bar, and an arc-shaped or circular spring-clasp, E', which is adapted to hug tightly against the roller or bar and clamp it between said clasp and the opposite side of

the socket. As here shown, the clasp E' consists of a piece of spring metal secured to the casting of the socket by being inserted between dovetailed or undercut legs *c*, (shown in Figs. 3 and 4;) but it might be otherwise secured.

Attached to each of the sockets E is a clamp, F, which is pivoted at *d*, and comprises a broad clamping face or head, *e*, and a thumb-piece, *f*, as best seen in Fig. 3. The sockets E also comprise feet *g*, which are adapted to rest upon the window-casing, and when the roller or bar D is inserted between the sides of the casing A it may be secured by pressing down the clamps independently of the roller or bar, so that they will wedge against opposite sides of the casing, and any movement to pull the roller or bar up will wedge the clamps more tightly against the casing. If desired, clamps might be otherwise secured to the roller or bar and the sockets dispensed with.

The upper end of the screen C may be fastened to the casing A by means of springs, which, as here represented, consist of rubber bands or straps *h*, fastened by eyes to the strip or bar *b* and by hooks *i* to the sides of the window-casing. These hooks may, however, be dispensed with, and the bands attached to a rod or bar of metal having bent ends, which is adapted to be inserted between the sides of the casing and to be retained in place by its elasticity. In the latter case the window-casing would have no devices permanently fixed to it for securing the screen.

The rubber bands should be so fastened to their suspending devices that in order to bring the roller or bar D down to the bottom of the casing the bands must be slightly stretched, and in such case the screen will always be under a slight tension, which will keep it taut and straight.

If it is desired to apply the screen to the upper instead of the lower part of the window, the screen may be inverted, and the springs placed at the bottom and the roller or bar D at the top.

The rubber bands might be dispensed with and other springs substituted therefor, and where one end of the screen is fastened by springs to the casing the roller or bar at the other end may be nailed or secured to the casing otherwise than by the clamps.

In order to apply the screen or a shade to any window, all that is necessary in any case is to place the hooks *i* in the casing, and the screen can be as readily removed.

By my invention I provide a very cheap screen, which may be applied to any window quickly and without much expense, and which in these respects is far more advantageous than the ordinary screen-frames. When the screen is removed it can be wound on the roller or bar D.

In lieu of two clamps, one only might be used, the clamp being at one end of the bar or rod and serving to crowd the other end

against the opposite side of the casing. In lieu of the rubber bands applied as shown in Figs. 1 and 2, I may provide the strip or bar *b* with dogs *s* pivoted thereto—one near each end—and the elastic bands *h* in such case would be connected to the strip or bar *b* and the dogs *s*, as clearly seen in Fig. 5. The elastic bands then exert a greater pull on the dogs *s* than the weight of the screen, and the said dogs are thereby caused to bite into or on the opposite sides of the casing.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a screen or shade, of a roller or bar attached to one end thereof and adapted to enter between the sides of and extend across a window-casing, and a clamp or clamps attached to the end or ends of said roller or bar and adapted to be pushed downward independently of said roller or bar, after the latter is in place, so as to wedge against the side or sides of the window-casing, and so that any upward movement of said roller or bar will serve to tighten said clamp or clamps, substantially as specified.

2. The combination, with a screen or shade, of a roller or bar attached to the end thereof and adapted to enter between the sides of and extend horizontally across a window-casing, and a clamp or clamps for engaging with the side or sides of the casing, and each provided with a spring-clasp whereby it may be secured on said roller or bar, substantially as specified.

3. The combination, with a screen or shade of a roller or bar attached to the end thereof and adapted to fit between the sides of a window-casing, a socket or sockets fitting said roller or bar, and a clamp or clamps pivoted to said socket or sockets and adapted to engage with the side or sides of a window-casing, substantially as specified.

4. The combination, with a screen or shade, of a roller or bar attached to one end thereof and adapted to enter between the sides of a window-casing, and springs for attaching the other end of said screen or shade to the casing, substantially as specified.

5. The combination, with a screen or shade, C, of the strip *b*, attached thereto, the rubber straps *h*, and the roller or bar D, substantially as specified.

6. The combination of the screen or shade C, the roller or bar D, the sockets E, and pivoted clamps F, the strip *b*, and the rubber straps *h*, substantially as specified.

7. The combination of the socket E, comprising the spring-clasp E', and the pivoted clamp F, substantially as and for the purpose specified.

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Witnesses:

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