(No Model.)

S. J. VANCE.

WINDOW SCREEN.

No. 332,574. Patented Dec. 15, 1885.

Fig. 1.

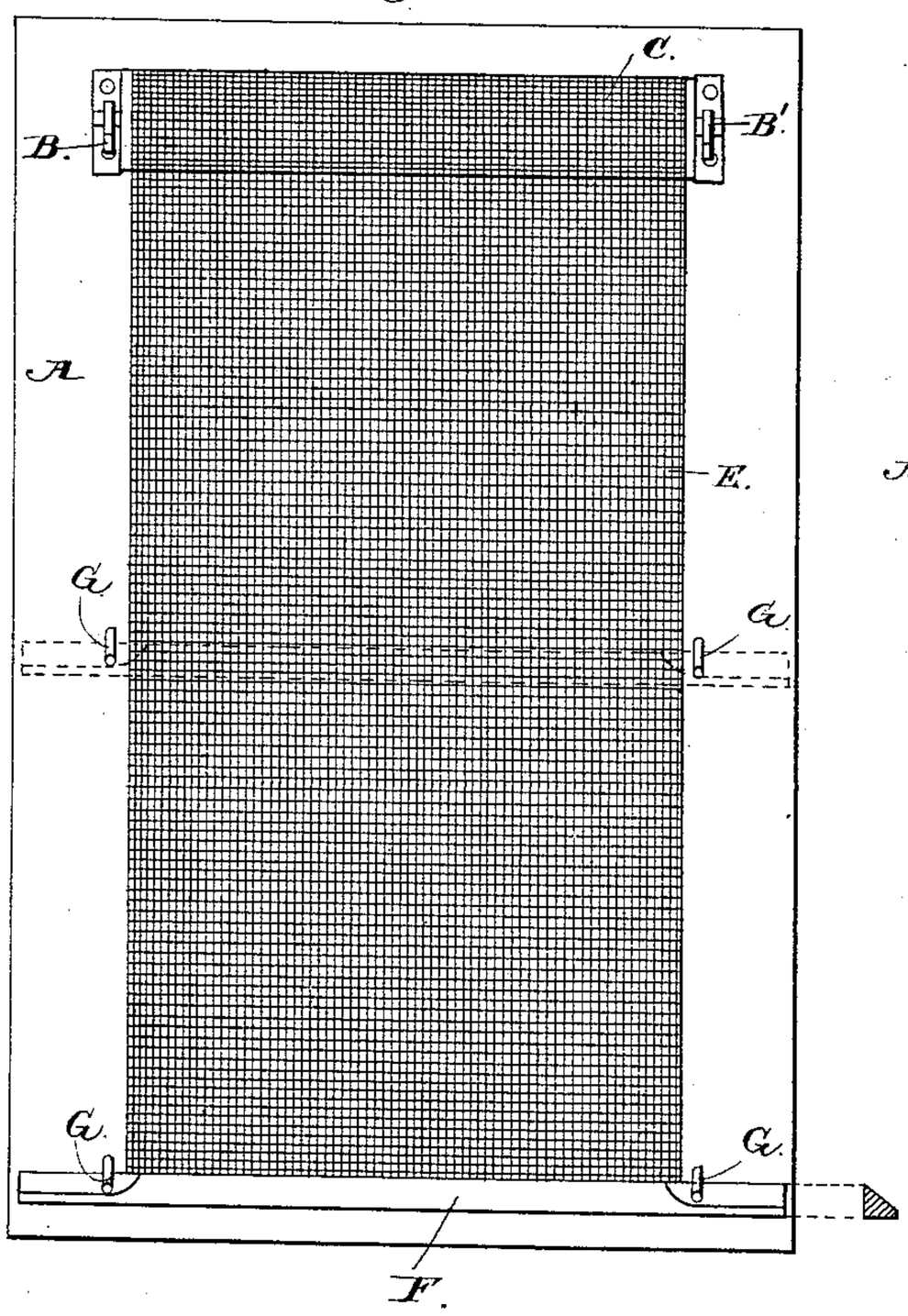


Fig. 2.

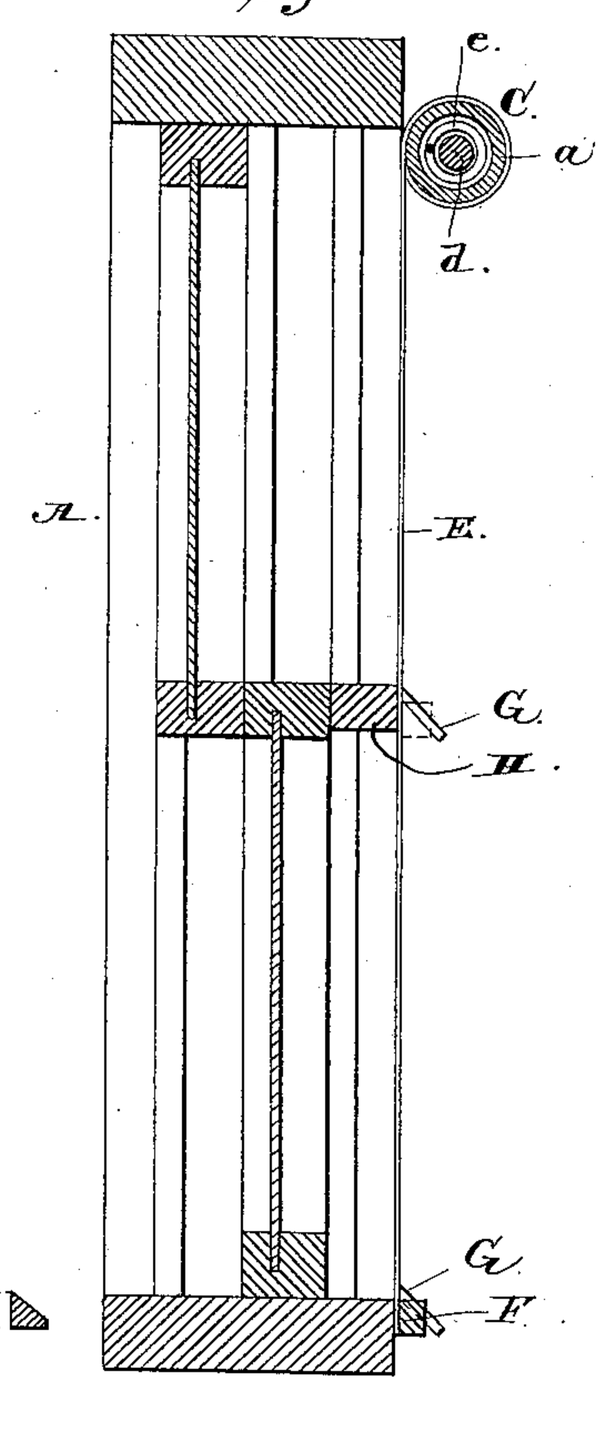


Fig. 3.

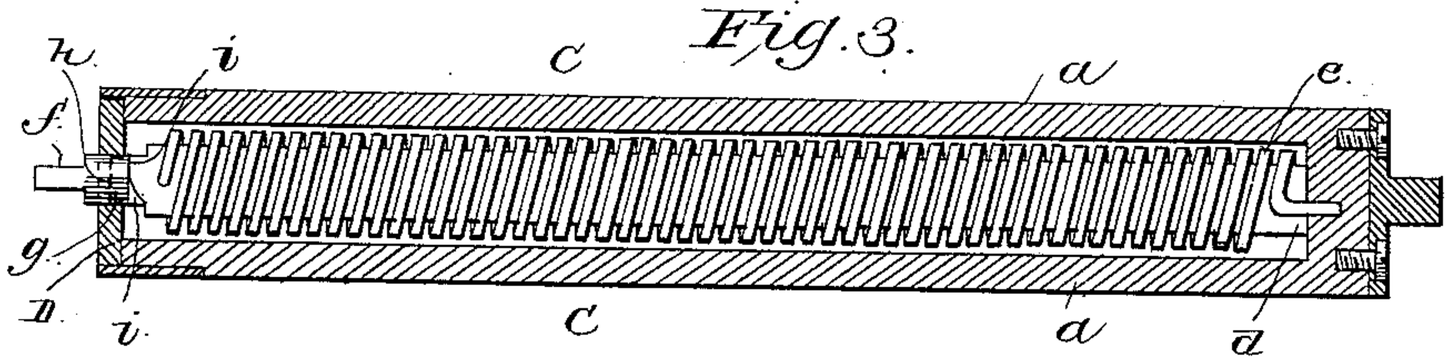


Fig. 4.

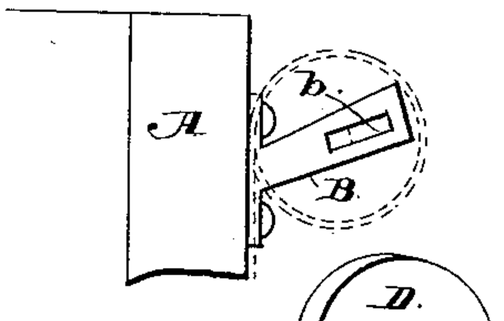


Fig. 5.

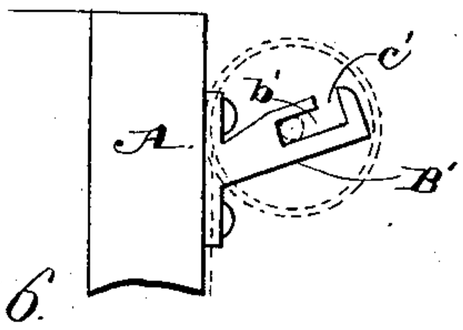
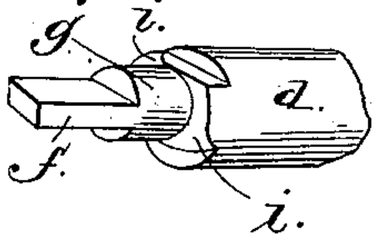


Fig. 6.



WITNESSES

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SAMUEL JASPER VANCE, OF MACOMB, ILLINOIS.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 332,574, dated December 15, 1885.

Application filed July 6, 1885. Serial No. 170,792. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. VANCE, a citizen of the United States, residing at Macomb, in the county of McDonough and State of Illinois, have invented a new and useful Improvement in Window-Screens, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in window screens; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of a window with my screen applied thereto. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail sectional view through the roller of the screen. Figs. 4 and 5 are detail views of the brackets for supporting the roller. Fig. 6 is a detailed perspective view of the roller-cap and the spring-rod, showing the details of construction of said cap and rod.

A represents a window-frame of the ordinary construction, to the inner side of the casing of which, at its upper end, are secured bracket-arms B and B′, which are arranged in a horizontal line with each other, and which extend outwardly and upwardly from the window-casing. The bracket-arm B is provided with an inclined elongated slot, *b*, and the bracket B′ is provided with a similar slot, *b′*, having an opening, *c′*, at its outer end to receive one end of the projecting journal of the roller C. This roller is composed of the cylindrical casing *a*, a shaft, *d*, which extends longitudinally through the casing, and a coiled spring, *e*, one end of which is secured to the shaft and the opposite end of which is secured to the casing, as shown. The shaft *d* has one end projecting beyond the end of the casing, so as to provide a journal for the latter, and this projecting end of the shaft is flattened, as at *f*, and adapted to enter the slot *b* of the bracket-arm B. The end of the shaft *d*, adjacent to the reduced portion thereof, is rounded, as at *g*, and bears in a cap, D, which is secured in one end of the casing. This cap is provided with a central groove, *h*, on its inner side, and the shaft *d* is squared on its portion adjacent to the rounded portion *g*, and adapted to fit in the groove in the cap when the shaft is drawn endwise, and thereby lock the shaft to the cap after the spring has been wound up and before the fixture is placed in position in the brackets. One corner of each of the notches *i*, which are formed by squaring the shaft, as described, is rounded off, as shown, so as to prevent the shaft from catching in the groove in the cap when the screen is being wound up, as will be hereinafter more fully set forth.

D represents a screen, which is formed either of cotton or wire netting, and is secured at its upper end to the roller C. To the lower end of this screen is attached a stick, F, the ends of which project beyond the sides of the screen, and are beveled on their outer sides, as shown, these bevels extending inwardly and upwardly so as to give the ends of the stick a wedge shape.

G represents pins, which are secured to the inner sides of the casing of the window, and project downwardly and outwardly therefrom, or in the opposite direction to the inclination of the bracket-arms. As here shown, two pairs of these pins are secured to the window-casing, one pair being at the lower end thereof and the other pair being on a line with the meeting edges of the sashes, and across the window-frame on its inner side, in a line with the upper pair of pins, is secured a strip, H, the inner face of which is on a line with the inner faces of the sides of the window-casing.

The operation of my invention is as follows: Owing to the inclined slots with which the bracket-arms are provided, the roller is caused to bear against the inner side of the window-frame by its own gravity and the tension of the spring, so as to form a tight joint therewith. The ends of the stick F at the lower end of the screen catch under the pins G and bear closely against the casing, and thus stretch the window-screen tightly against the face of the casing, so as to prevent insects from entering the room between the screen and the window-frame. When it is desired to raise the screen, the stick is released from beneath the lower pair of pins, when the spring draws it up by rotating the roller and winding the screen thereon, the same as in the case of the window-curtains, which are provided with spring-rollers now in common use. When the stick F

reaches the upper pair of pins, it may be secured thereto, and thereby serve as a screen for the upper sash or portion of the window, or the screen may be entirely rolled up out of the way, if desired.

This screen is also adapted to be used in connection with doors, and may be stretched from the top to the bottom thereof, as here shown, or crosswise from jamb to jamb, care being taken to have the slots in the brackets which support the roller inclined in the opposite direction to the pins which catch the wedge ends of the stick F.

I am aware that it has been heretofore proposed to provide a window-sash with a pair of screens attached to the top and bottom thereof, a pair of gravitating rollers journaled in brackets having inclined slots for the other ends of said screens, and friction-cords that support said rollers and wind upon them, causing them to revolve as the sash is raised and lowered, and draw the screens taut to cover the spaces above and below the sash, and this I disclaim.

I am also aware that it has been proposed to attach ratchet-strips to the inner sides of the window-casing to hold the curtain-stick in any required place, and this, also, I disclaim.

My invention differs from these in the means I provide for keeping the roller and the stick pressed tightly against the face of the window-casing at all times, the screen being stretched tightly between said stick and roller so that there will be no spaces between the edges of the screen and the faces of the window-casing for the flies to enter.

Having thus described my invention, I claim—

1. The combination, with a window or door frame having the brackets provided with inclined slots, and the pins on the opposite side from the brackets and inclined in the opposite direction from the slots of said brackets, of a spring-roller journaled in the slots of the brackets, a screen on said roller, and the rod F at the opposite end of the screen, said rod being adapted to engage with the inclined pins, whereby the screen is stretched tightly across the frame, its sides being in contact with the sides of the frame, substantially as described.

2. The combination, with a window or door frame having the brackets provided with inclined slots, and the projecting pins on the side opposite the brackets and inclined in the opposite direction to the slots, with the spring-roller journaled in the slots, of the screen secured to the roller at one end and having the stick F at its opposite end, said stick having the projecting beveled ends adapted to bear under the projecting pins, for the purpose set forth, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

SAMUEL JASPER VANCE.

Witnesses:

CHARLES MAPES,

ARTHUR SIMPSON.