

J. DONNELLY.  
 WINDOW SCREEN.  
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1,344,758.

Patented June 29, 1920.

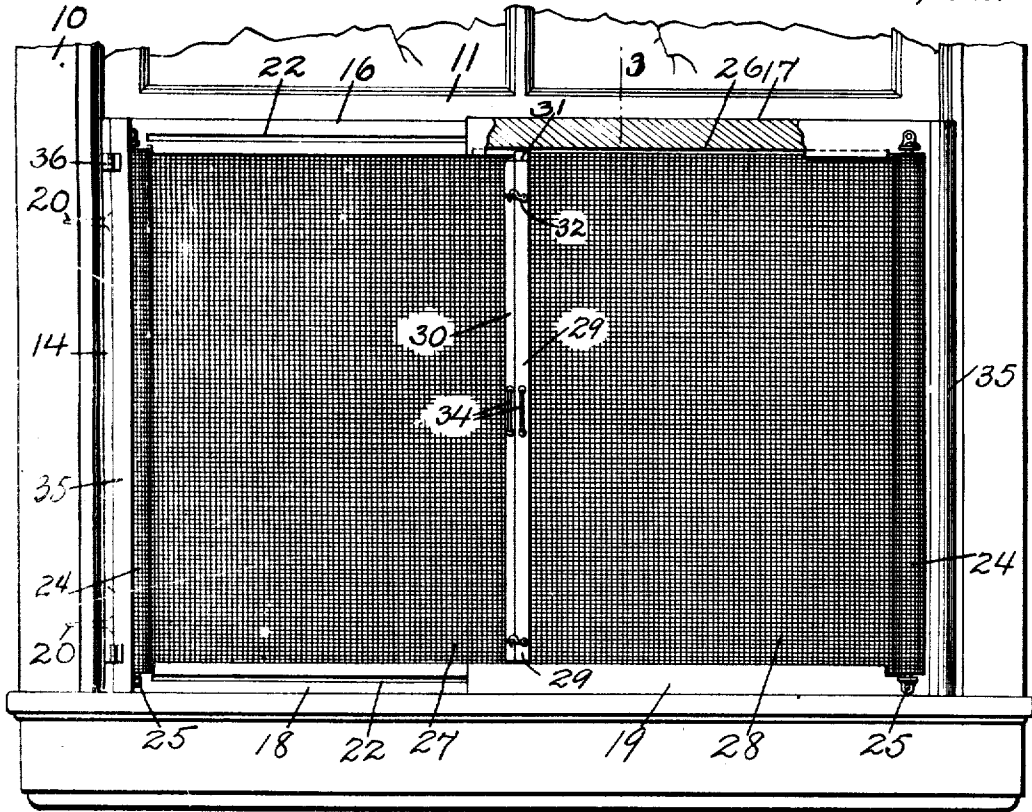
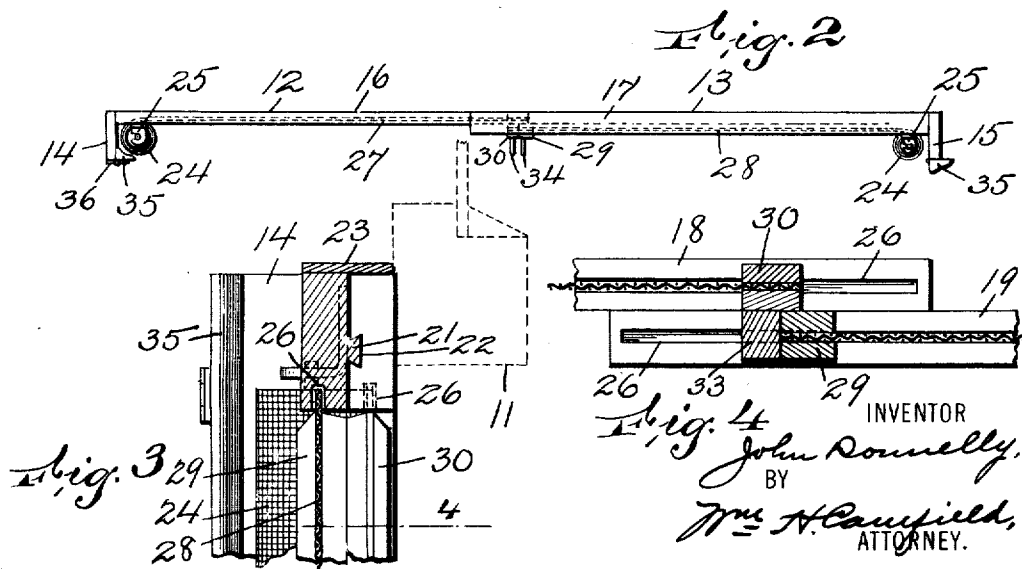


Fig. 1



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JOHN DONNELLY, OF NEWARK, NEW JERSEY.

WINDOW-SCREEN.

1,344,758.

Specification of Letters Patent. Patented June 29, 1920.

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*To all whom it may concern:*

Be it known that I, JOHN DONNELLY, a citizen of the United States, and a resident of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

This invention relates to an improved screen for windows, and is preferably made in the form of a half screen, that is, it is placed only in the lower half of the window and is of the kind that utilizes a screen on a spring roller and is adjustable to different widths of window frames.

The invention consists of a screen of this kind which is made of two members which are slidably arranged, each of the members having a screen mounted on a spring roller, the screens being adapted to be brought together at approximately the center of the screen, fastened in this position to hold the screen shut and adapted to be slid, when released, to the sides of the window so that the screen can be opened whether the window is open or shut, and the frame does not have to be disturbed.

In my improved screen the frame is preferably securely attached to the window frame by screwing or otherwise and presents a substantial and neat appearance, and, as stated above, can be opened or shut without uncomfortable lifting or removing of the frame.

The invention is illustrated in the accompanying drawing, in which Figure 1 is a front view, with the top rail partly broken away, and also illustrating the lower part of a window frame and the lower sash. Fig. 2 is a top view of the screen shown in Fig. 1. Fig. 3 is an enlarged section of the top rails of the screen, taken on a plane indicated by line 3 in Fig. 1, and Fig. 4 is a horizontal section through the meeting rails of the screen, taken on a plane indicated by line 4 in Fig. 3.

In the drawing, 10 indicates the window frame and 11 the lower sash, the lower sash being illustrated raised, the bottom rail being therefore placed adjacent to the top rail of the screen.

The screen consists of two members 12 and 13, which are substantially U-shaped, each having the side strips 14 and 15, respectively, the top rails 16 and 17, respectively, and the bottom rails 18 and 19, respectively. The device is preferably held in position by

screws 20, which are screwed through the side strips 14 and 15 into the sides of the window frame, and the bottom rails 18 and 19 rest on the window sill so that around the outside edge of the frame there is a tight fit.

The top and bottom rails of the opposed members are in sliding relation and are preferably held in such relation by suitable means, the means illustrated consisting of a rib 21 on the top and bottom rails 17 and 19 which fit into the grooves 22 of the top rail 16 and in the bottom rail 18. The two members are therefore placed one slightly in advance of the other, and in the drawing the member 13 is farthest from the outside, and to cover the intervening space so that the bottom rail of the sash will bear against the screen frame for its whole width I place a covering strip 23 on the top of the top rail 17, as will be evident from Fig. 3. This covering strip 23 projects forward so that its front edge is substantially in the same plane as the front edge of the rail 16, and the lower rail 11 of the sash therefore bears against the screen all the way across.

Mounted in suitable brackets near the base of each U-shaped member, that is, closely adjacent to the side strips, are the spring rollers 24, which are the usual type of spring roller, mounted in the necessary brackets 25. On the under face of the top rails and the top face of the bottom rails are channels in which the bottom and top edges of the screens slide. Such grooves or channels are clearly illustrated at 26 in Figs. 3 and 4. The screen sections 27 and 28 are mounted on the rollers 24, and, their top and bottom edges fitting in the grooves 26, they can be easily slid backward and forward, and when released, the springs on the rollers (these springs not being shown) wind the screens up on the rollers.

To permit ready manipulation of the screens, the screen 28 is provided with a meeting rail 29 and the screen 27 is provided with a meeting rail 30, which have projections, made narrow as at 31, to fit in the grooves at the top and bottom of the meeting rails so that they will keep alined.

Suitable handles 34 can be installed on the meeting rails to facilitate their being handled, and, if desired, hooks 32 can be installed to hold the meeting rails together, although other means for this purpose can be employed if desired. The meeting rails, being slightly out of line, are made to abut

by reason of one of them being provided with a projecting strip, in the form shown this being the strip 33 of the meeting rail 30, which projecting strip is placed so as to be in line with the other meeting rail, and thereby a close joint to prevent the entrance of insects is provided. This structure will be clearly understood from Fig. 4.

This screen, when once installed, need not necessarily be removed in the winter time, the screen sections being compactly disposed of as they are wound up on the rollers 24. The trim appearance of the device can be enhanced by suitable covering strips 35, which are hinged, as at 36, and can be swung to partly conceal the rollers, the left hand covering strip in Figs. 1 and 2 being shown closed, and the one on the right hand side being swung open.

In this improved screen if the roller is broken, or if, for any other reason, the roller needs to be removed from the frame, it can be taken out the same as curtain rollers can be removed from their brackets and a new screen or new roller installed, as will be evident.

I do not wish to be limited to the particular form of screen shown herein, as minor changes can be made without departing from the scope of the invention.

It will be understood that this form of screen can be adapted for large or small screens and is not necessarily limited to a screen occupying but half of the window frame, and it can also be made in fixed size. The screen sections that are extended but part way across the opening are preferred over screens that are spread across the whole frame, because in case of strong wind the bracing of the section is such that it does not come out of the guides and grooves in which it operates and does not blow away from the frame to give clearance for the entrance of insects. In a long screen the fastening means are so far apart that the screen bulges and becomes loosened at its edges from the guide, whereas with the screen sections supported as in this invention there is more stability given to the screen section, that is, the screen cloth, and it remains substantially flat and even under all weather conditions.

I claim:

1. A screen comprising a frame, which frame consists of two opposed U-shaped members in sliding relation in parallel planes, vertically arranged spring rollers at the sides of the frame, the top and bottom rails of the U-shaped members having grooves therein, a screen section on each roller, meeting rails on the free ends of the screen sections, the ends of the meeting rails and the edges of the screens sliding in the grooves, and means for securing said meeting rails in position when they abut.

2. A screen comprising a frame, which frame consists of two opposed U-shaped members arranged to slide in parallel planes, the top rail of one member having a covering strip to project so that its front edge is in line with the front edge of the upper rail of the other member, spring rollers on the sides of the frame, screen sections on the rollers, meeting rails on the screen sections and adapted to abut when the screen is closed, and means for securing the meeting rails in position when they abut, the top and bottom rails of the members having grooves in which the ends of the meeting rails and the edges of the screen sections travel.

3. A screen comprising a frame, which frame consists of two opposed U-shaped members arranged to slide in parallel planes, the top rail of one member having a covering strip to project so that its front edge is in line with the front edge of the upper rail of the other member, spring rollers on the sides of the frame, screen sections on the rollers, meeting rails on the screen sections and adapted to abut when the screen is closed, means for securing the meeting rails in position when they abut, the top and bottom rails of the members having grooves in which the ends of the meeting rails and the edges of the screen sections travel, and a covering strip mounted so as to swing on each side rail to act as fenders to said rollers.

In testimony that I claim the foregoing, I have hereto set my hand, this 23d day of August, 1919.

JOHN DONNELLY.