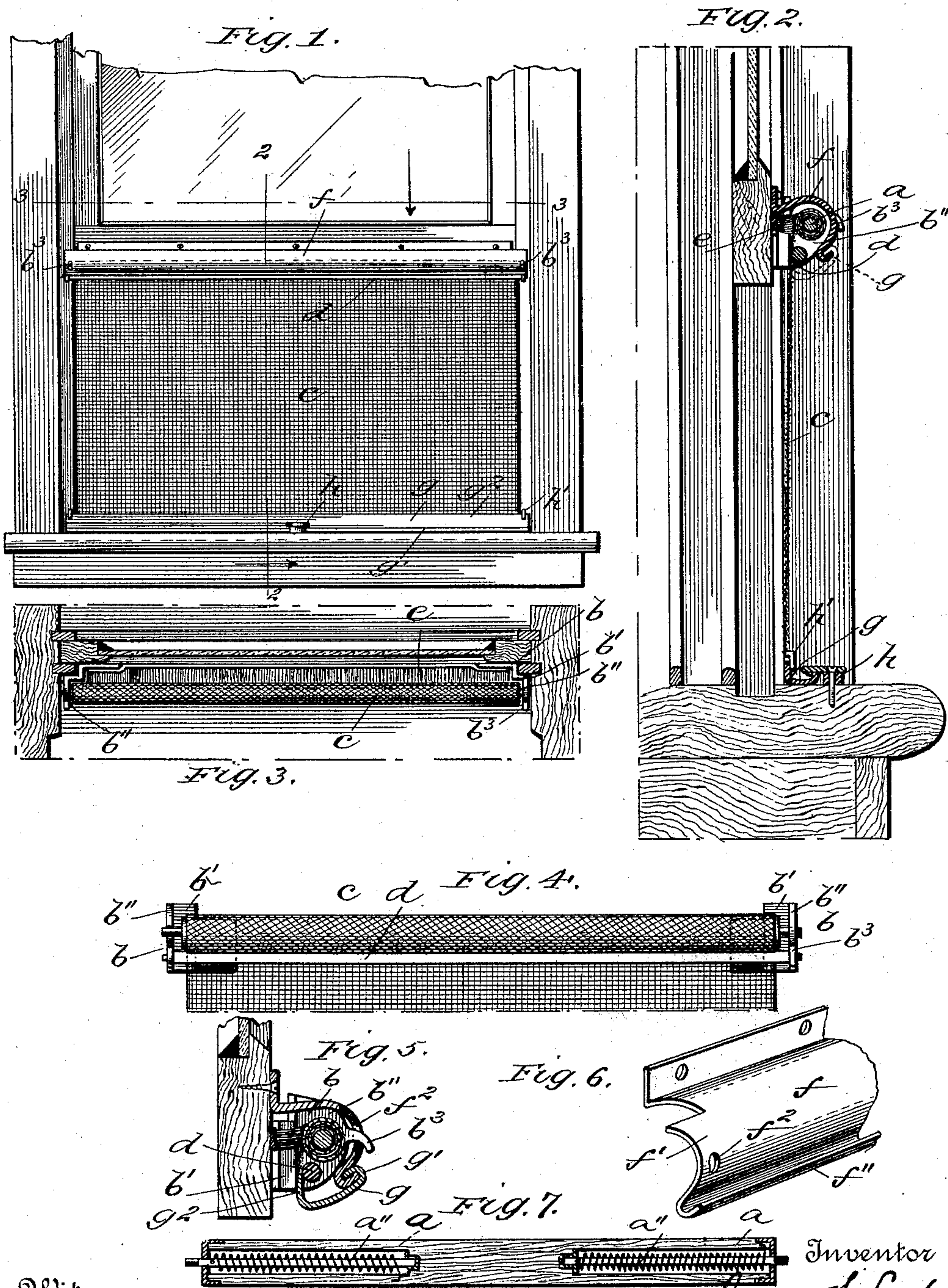


(No Model.)

J. S. LESTER.  
WINDOW SCREEN.

No. 476,154.

Patented May 31, 1892.



Witnesses  
John M. Walsh  
Edward J. Curran.

Inventor  
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# UNITED STATES PATENT OFFICE.

JAMES S. LESTER, OF ATLANTA, GEORGIA.

## WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 476,154, dated May 31, 1892.

Application filed February 8, 1892. Serial No. 420,778. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES S. LESTER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents an inside view of a portion of a window provided with my improvements; Fig. 2, a vertical sectional view thereof on the line 2 2 of Fig. 1; Fig. 3, a horizontal sectional view on the line 3 3 of Fig. 1; Fig. 4, a detail elevation of the screen-roller and supporting-brackets; Fig. 5, a detail vertical sectional view of the lower end of the lower sash, showing the roller-casing closed; Fig. 6, a detail perspective view of one end of the roller-casing, and Fig. 7 a detail longitudinal sectional view of the spring-actuated roller.

This invention relates to window-screens for use in dwellings, railroad-cars, boats, and other places where it is desirable to exclude insects, dust cinders, &c., and it has special relation to that class of screens adapted to be removably attached to the window-sash and automatically unwound from a spring-actuated roller to cover the opening made by opening the sash, as will fully hereinafter appear.

In the drawings, *a* designates a spring-roller mounted in two brackets *b*, secured on the lower end of the lower sash, one bracket being arranged near each side of the window. This roller has wound upon it the usual screen *c* and is preferably constructed as shown in Fig. 7—that is, an axial recess is formed in each of its ends and extended nearly to its center, and a rod *a'* is inserted in each of these recesses and stepped in a socket in the inner ends thereof, the outer ends of these rods extending through the caps on the ends of the roller and formed angular in shape in order that they will not be permitted to revolve when inserted in the brackets. A coil-spring surrounds each of these non-rotatable rods and has one of its ends secured to the rod and its other end to the rotatable roller, whereby the roller will be automatically revolved in the usual manner with spring-actuated rollers. The advantage of constructing

the roller in this manner is that shorter rods and springs may be employed, strength and simplicity being thereby attained and the torsional power on each end made uniform.

The brackets *b*, in which the roller is supported, are secured to the face of the lower sash close to the inside sash-strips and bent at *b'*, so as to extend over in front of said strips and bring their supporting-arms *b''* close to the respective sides of the window-frame, as shown most clearly in Fig. 3. The object of thus extending the brackets in front of the sash-strips is to cause the side edges of the screen *c*, when the same is unwound, to overlap the inner edges of the strips, thereby completely covering the opening formed by opening the sash and effectually excluding insects, &c. To keep the screen close to the sash-strips, irrespective of the quantity unwound from the spring-roller, a roller *d* is journaled in the bracket-arms *b''* below the spring-roller and closer to the sash than the same. The screen passes freely over this roller as it is wound and unwound and is kept close to the sash-strips, no matter to what extent it is unwound, as is evident.

Secured to the sash behind the spring-roller is a strip *e* of suitable material, which extends the full distance between the brackets and is provided with a flexible brush, which projects outwardly and constantly bears against the screen on the roller. This brush being flexible, readily adjusts itself to the varied width of the space between the screen-roller and the sash, caused by the winding and unwinding of the screen, and thereby serves to prevent insects obtaining ingress by passing up between the sash and the roller. It also serves to brush off any insects, cinders, &c., that may be clinging to the screen when it is wound upon the roller.

If desired, a casing *f* may be secured over the screen-roller and brackets to protect and inclose it, this casing being secured to the sash above the brackets and extending the full distance between the sash-strips. This casing extends outwardly over the roller and down in front of it, thereby practically inclosing it. Extensions *f'* are formed on its ends to extend outwardly over and rest on the bracket-arms *b''* in front of the sash-strips, said bracket-arms being provided with



outwardly and downwardly extending hooks  $b^3$ , which project through openings  $f^2$  in the extensions  $f'$  and serve to assist in holding the casing removably in place. The casing  
 5 is thereby made to assist in supporting and bracing the brackets  $b$ , as is evident, the downwardly-projecting lugs  $b^3$  serving to prevent the casing being removed without first removing the screws that secure it to the sash.

10 The lower or free end of the screen has secured to it a metal strip  $g$ , which is bent longitudinally to form the upwardly-extending part  $g^2$  and the outwardly-projecting part  $g'$ . The screen edge is attached to the upper edge  
 15 of the part  $g^2$ , and said part rests up between the roller  $d$  and the shoulders  $b'$  of the brackets when the screen is entirely wound, as shown in Fig. 5. The part  $g'$  has its outer edge turned upwardly and inwardly and is  
 20 adapted to engage over a similarly-formed lip  $f''$  on the lower edge of the casing, as shown in Fig. 5, so as to entirely inclose the working parts when the screen is not in use.

The screen is secured detachably to the sill  
 25 by a turn-button  $h$ , pivoted on the same and adapted to engage over the bent part  $g'$  of the strips  $g$ , as shown in Fig. 2, and by a pair of hooks  $h'$ , secured in the sash strips or jambs and adapted to engage over the upper edge of  
 30 the part  $g^2$  of the said strip. In this manner practically all obstructions are removed from the sill, and, if desired, it is possible to do away with the button also and rely upon the hooks  $h'$  to hold the screen.

35 If desired, it is obvious that the screen-

roller and its attachments may be attached to the upper sash and the button and hooks secured to the upper part of the window-frame, instead of as shown, without departing from the invention.

40 Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of a window frame and sash, a pair of brackets  $b$ , secured to the  
 45 lower sash and having their supporting-arms bent around in front of the sash-strips, as at  $b'$ , these bracket-arms being provided with outwardly and downwardly projecting fingers  $b^3$ , a casing  $f$ , removably secured to the  
 50 sash above the brackets and extending outwardly and downwardly in front thereof, the ends of this casing being extended laterally, as at  $f'$ , so as to rest upon the bracket-arms, and provided with openings  $f^2$ , through which  
 55 the fingers  $b^3$  project, a spring-actuated screen-roller journaled in the bracket-arms under the casing and carrying a screen, means for detachably securing the lower edge of the  
 60 screen to the sill, and a roller journaled in brackets under the screen to keep the screen close to the sash-strips, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES S. LESTER.

Witnesses:

FRANK PAGE,  
 J. M. MCAFEE.