

M. F. HUTCHISON.
 ROLLER SCREEN.
 APPLICATION FILED JAN. 5, 1910.

Patented July 18, 1911.

998,006.

2 SHEETS—SHEET 1.

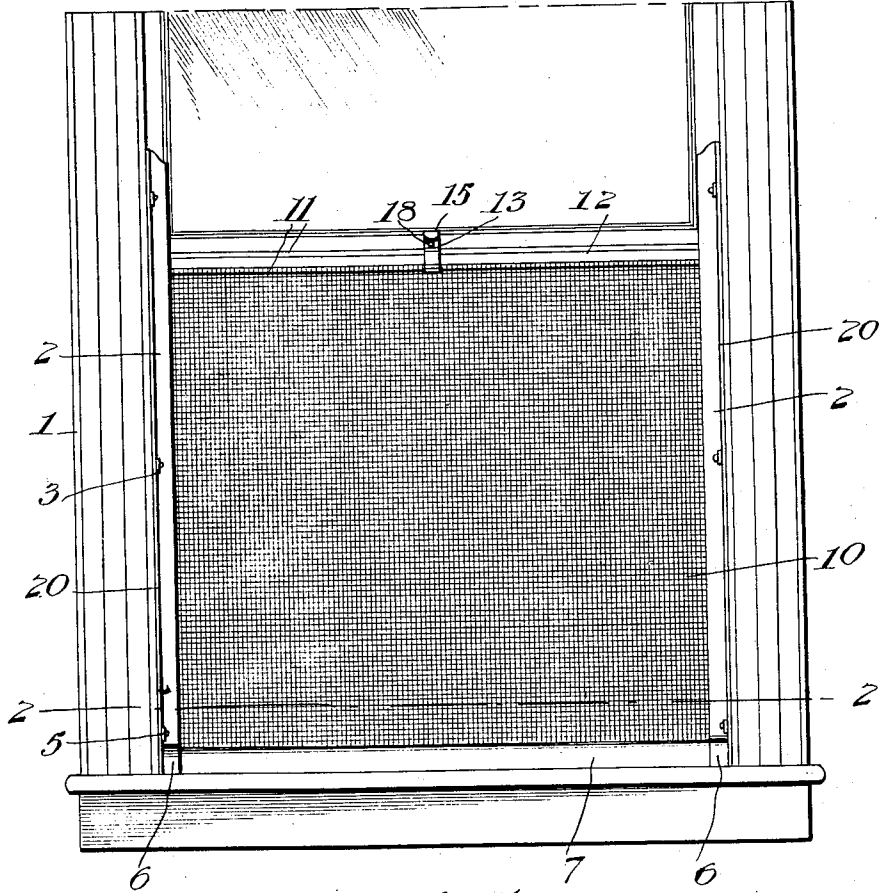


Fig. 1.

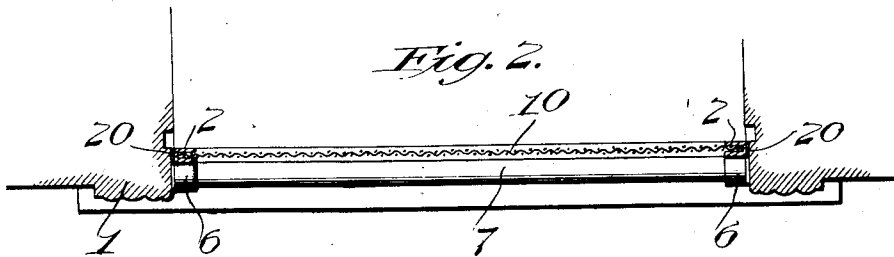


Fig. 2.

WITNESSES

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Fig. 5.

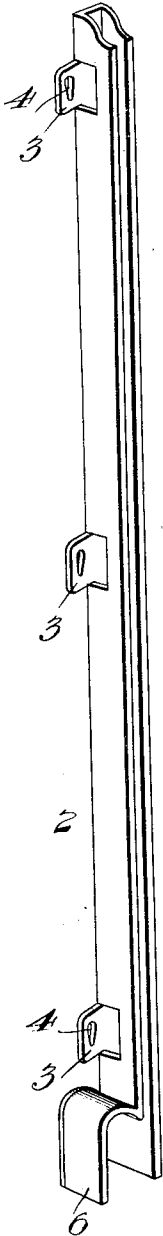


Fig. 4.

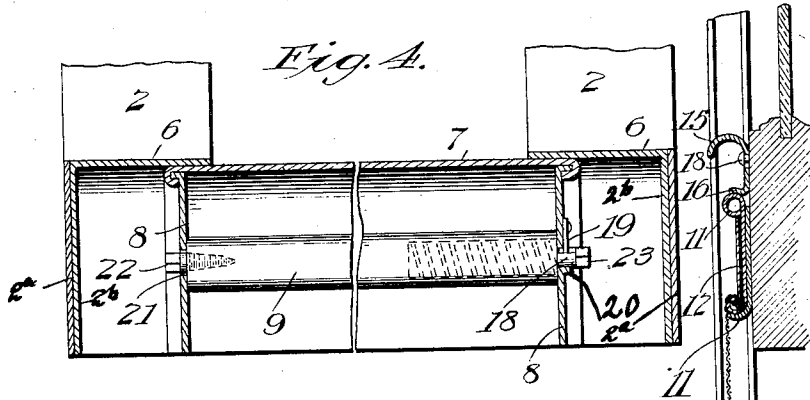


Fig. 6.

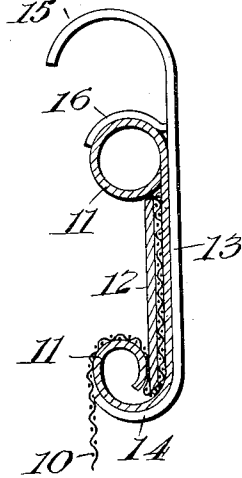


Fig. 8.

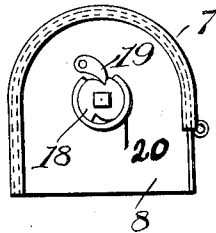


Fig. 3.

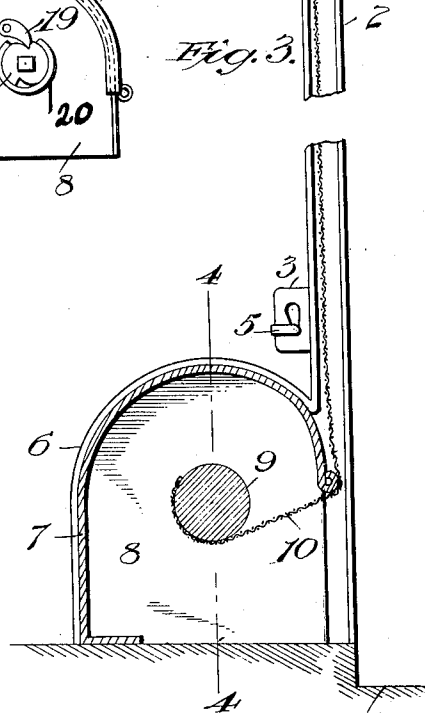
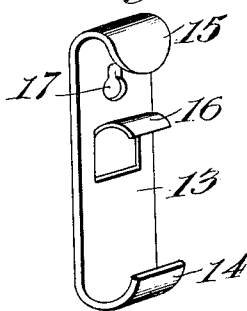


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

MAURICE FRANK HUTCHISON, OF FLORIS, VIRGINIA, ASSIGNOR OF ONE-HALF TO
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ROLLER-SCREEN.

998,006.

Specification of Letters Patent. Patented July 18, 1911.

Application filed January 5, 1910. Serial No. 536,563.

To all whom it may concern:

Be it known that I, MAURICE FRANK HUTCHISON, a citizen of the United States, residing at Floris, county of Fairfax, and State of Virginia, have invented certain new and useful Improvements in Roller-Screens, of which the following is a full, clear, and exact specification.

This invention relates to window screens, and is designed as an improvement on the roller window screens described and claimed in Letters Patent granted to me as follows, to wit: under date of February 26, 1901, No. 668,735; under date of March 25, 1902 No. 696,373, and under date of August 16, 1904 No. 767,644.

The object of the present invention is to improve the details of roller window screens of the type disclosed in the Letters Patent above referred to, and its construction will be fully described hereinafter in connection with the accompanying drawing which forms part of this specification.

In the drawings: Figure 1 is a front elevation of a portion of a window frame equipped with my improved screen. Fig. 2 is a transverse section on the line 2-2 of Fig. 1. Fig. 3 is a central vertical section of the device. Fig. 4 is vertical section on the line 4-4 of Fig. 3. Fig. 5 is a view in perspective of one of the screen guides. Fig. 6 is a vertical section of the binding strip employed. Fig. 7 is a perspective view of the finger lift, and Fig. 8 is an end elevation of the roller casing.

The reference numeral 1 designates a portion of a window frame, to each side of which is secured a guide strip 2 provided with projecting struck up ears 3 formed with elongated slots 4 enlarged at their upper ends to adapt them to be readily attached to, and detached from headed pins 5 secured to the sides of the window frame, and adapted to be turned to retain the guide strips in position. Said ears 3 extend in a plane substantially the same as the base of the guide strips and at approximately right angles to the side members thereof.

The lower end of each of the guide strips 2 is provided with a curved extension 6, which embrace, and secure a hood or casing 7. The end walls 8, of the casing 7 are formed with bearings for a roller 9 to which one end of the screen material 10 is secured,

as best shown in Fig. 3. The lower end of each of the guide strips 2 is also provided with extended portions 2^a, 2^b, the portion 2^b being first bent downwardly and the portion 2^a then bent around against the portion 2^b, whereby the outer end of each of said guide strips or rather the curved extensions thereof, is closed. By thus closing the ends of the curved lower portion which embraces the roller casing on each end no open space remains whereby flies or other insects could enter the room around the screen roller casing.

The upper end of the screen material is attached to a strip preferably consisting of a single piece of sheet metal, the edges of which are turned to form parallel beads 11. A binding key 12 fits between the beads 11, and secures the screen material in place.

To raise and lower the screen I employ a finger piece of novel construction comprising a metal plate 13 having its ends curved to provide arms 14 and 15, and formed with a struck up curved lug 16. The plate 13 is also provided with an opening 17 to adapt it to engage a headed pin 18 projecting from the window sash rail. The lower arm 14, and the curved lug 16 of the plate 13 embrace the parallel beaded edges 11 of the screen holding strip and the upper curved arm 15 constitutes a handle by means of which the screen is manipulated.

The roller 9 (Figs. 4 and 8) is a spring roller provided at one end with a ratchet 18 adapted to be engaged by a pawl 19 on the corresponding end of the roller case. A bearing 20 for a stud 23 on this end of the roller 9 is formed out of the metal of the end of the case, and said stud is adapted to fit a key whereby the roller spring may be wound up. The opposite end of the roller casing is provided with an opening 21 forming a bearing for the fastening screw 22. The head of this fastening screw is shaped so as to fit, if desired, a key like the key for winding the roller spring. In putting the roller into the roller case the same is slipped into position with the stud 23 properly in place and the headed screw 22 is then screwed into position, thereby securing the roller within the case ready for operation.

A distinguishing characteristic of the present invention is, that the curved extensions 6 at the lower ends of the guide strips

are of sufficient width to permit them to secure screen rollers of varying lengths, thus avoiding the necessity of adjusting the rollers, and rendering it possible to place screen rollers of stock sizes on the market.

Between each of the guide strips and the window frame I interpose a strip 20 of felt or like material serving as a weather strip when the screen attachment is kept in position during the winter season.

It will be apparent that the construction of the improvement is such that the screen material may be readily renewed when worn, without difficulty, and that the entire device may be easily applied to, and removed from a window, and is such as to adapt it to fit windows of various sizes.

By this construction I have produced a screen which can be placed on the market in compact form, in very few parts and convenient and easy to place in position on a window. In completing the device as will be apparent the roller with screen material in place thereon is properly adjusted in the case 7 and in that condition is packed with the guide strips ready for shipment. In putting up the screens on the windows the extent of adjustment for different size windows depends of course on the width of the guide strips 2 and these guide strips are ordinarily made to allow of the stock screens being fitted to windows of a difference in width of at least three inches.

Having thus fully described my invention what I claim as new, and desire to secure by Letters Patent is:

1. The combination with a window frame, of guide strips formed with integral slotted lugs for securing the strips, and with curved extensions serving as supports for a screen roller casing, the material forming said

guide strip bent to close the space formed at one end between the rear of said guide strip and the curved extension, a binding strip for securing the upper end of the screen material, and a finger lift embracing the binding strip.

2. The combination with a window frame, of guide strips formed with an integral slotted member for securing the strips, and with curved extensions serving as supports for a screen roller casing, the material forming said guide strips bent to close the space formed at one end between the rear of said guide strip and the curved extension, a binding strip for securing the upper end of the material and a finger lift embracing the binding strip.

3. The combination with a roller, window screen, of a binding strip for securing one end of the screen material, comprising a single piece of sheet metal having its edges bent to form parallel beads, a binding key fitting between said beads, and a finger-lift provided with arms to embrace the binding strip.

4. The combination with a roller window screen, of a binding strip for securing one end of the screen material, comprising a single piece of sheet metal bent to form oppositely facing sides, securing means fitting between said sides and the screen, and a finger lift provided with arms to embrace said binding strip.

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

MAURICE FRANK HUTCHISON.

Witnesses:

H. B. HUTCHISON,
RALPH CHAMBLIN.