

A. R. RHOADS.

WINDOW SCREEN.

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934,357.

Patented Sept. 14, 1909.

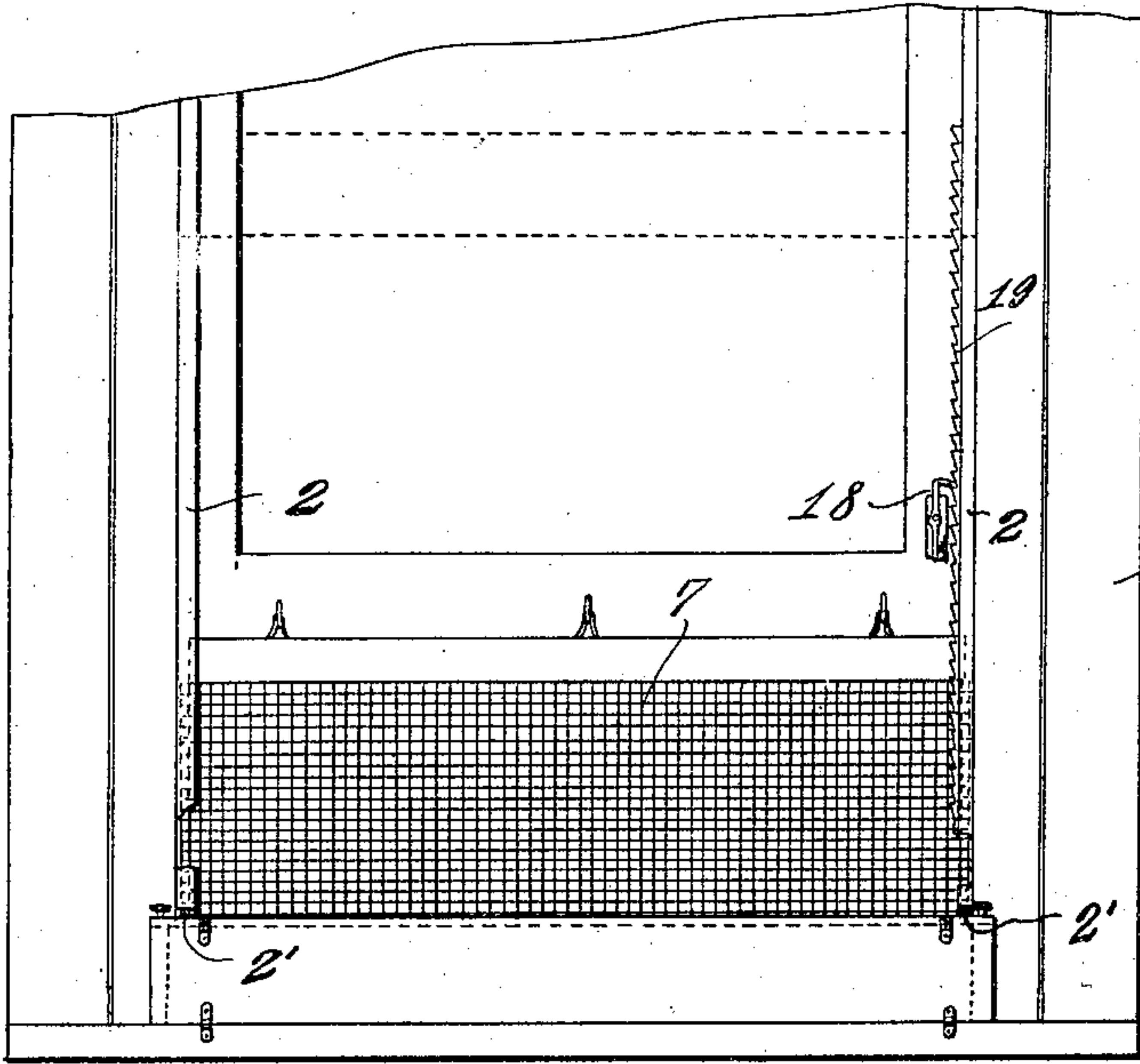


Fig. 1.

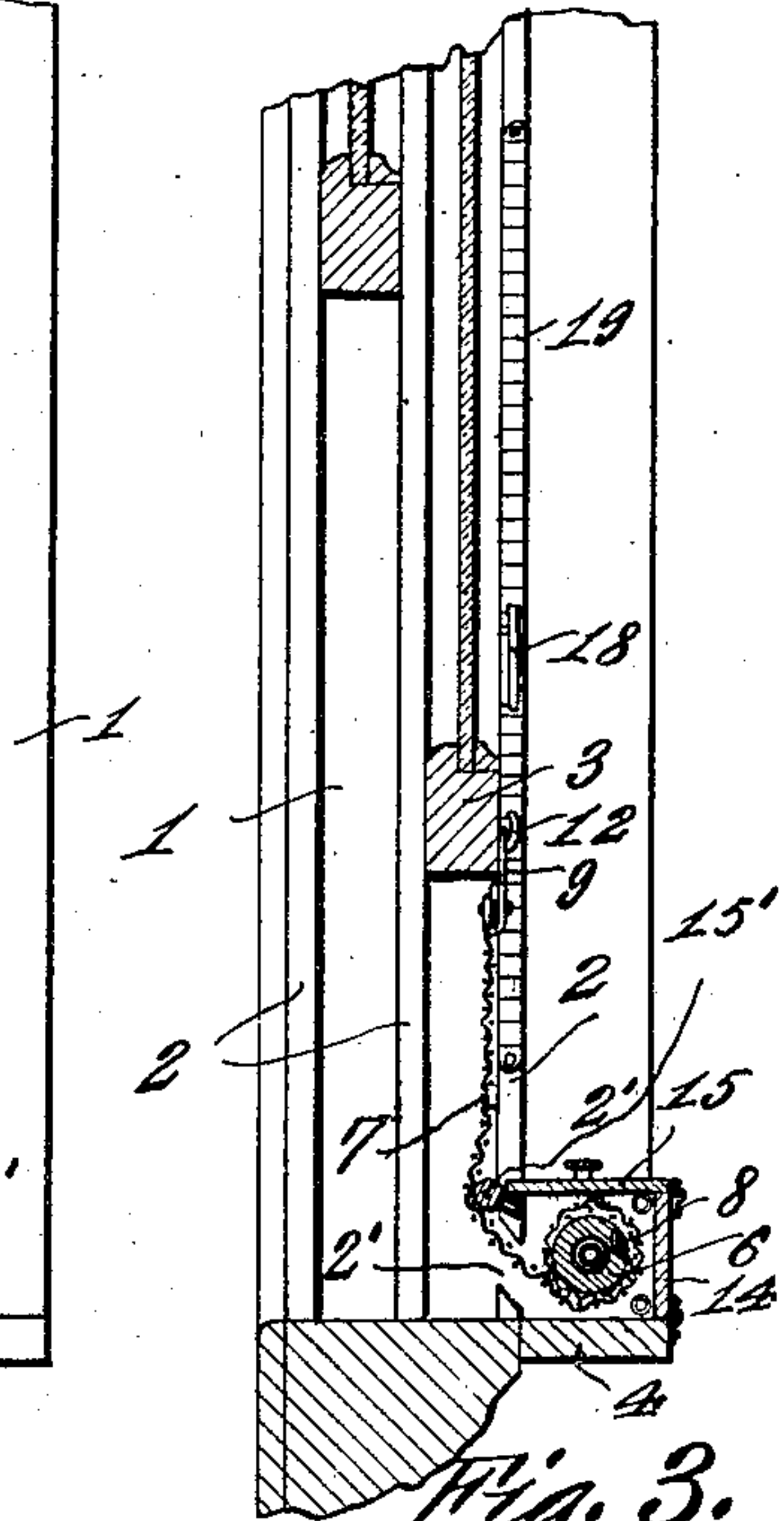


Fig. 3.

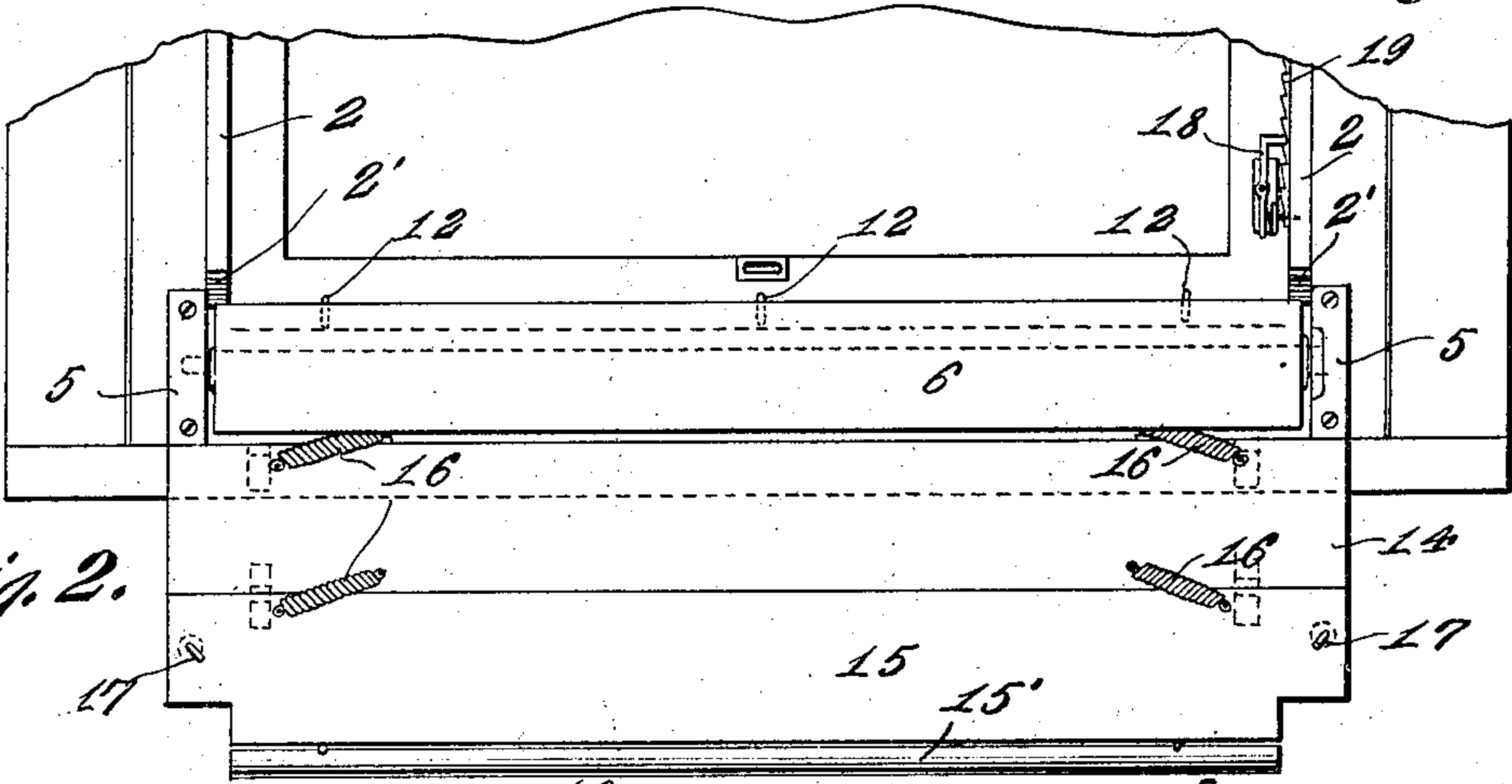


Fig. 2.

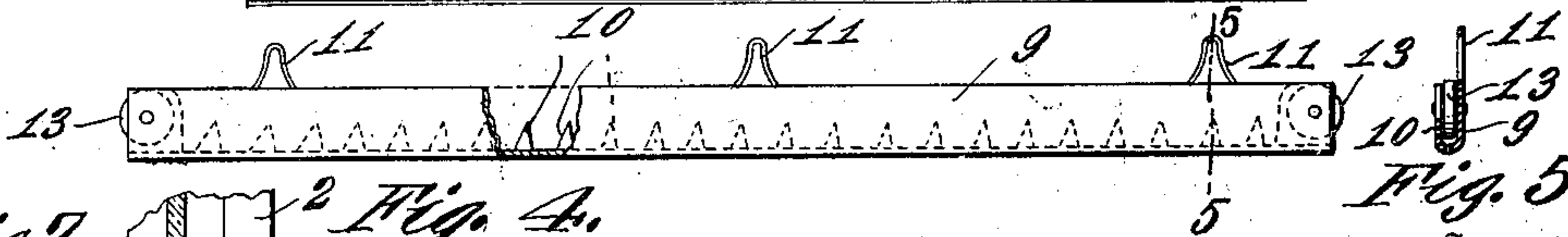


Fig. 5.

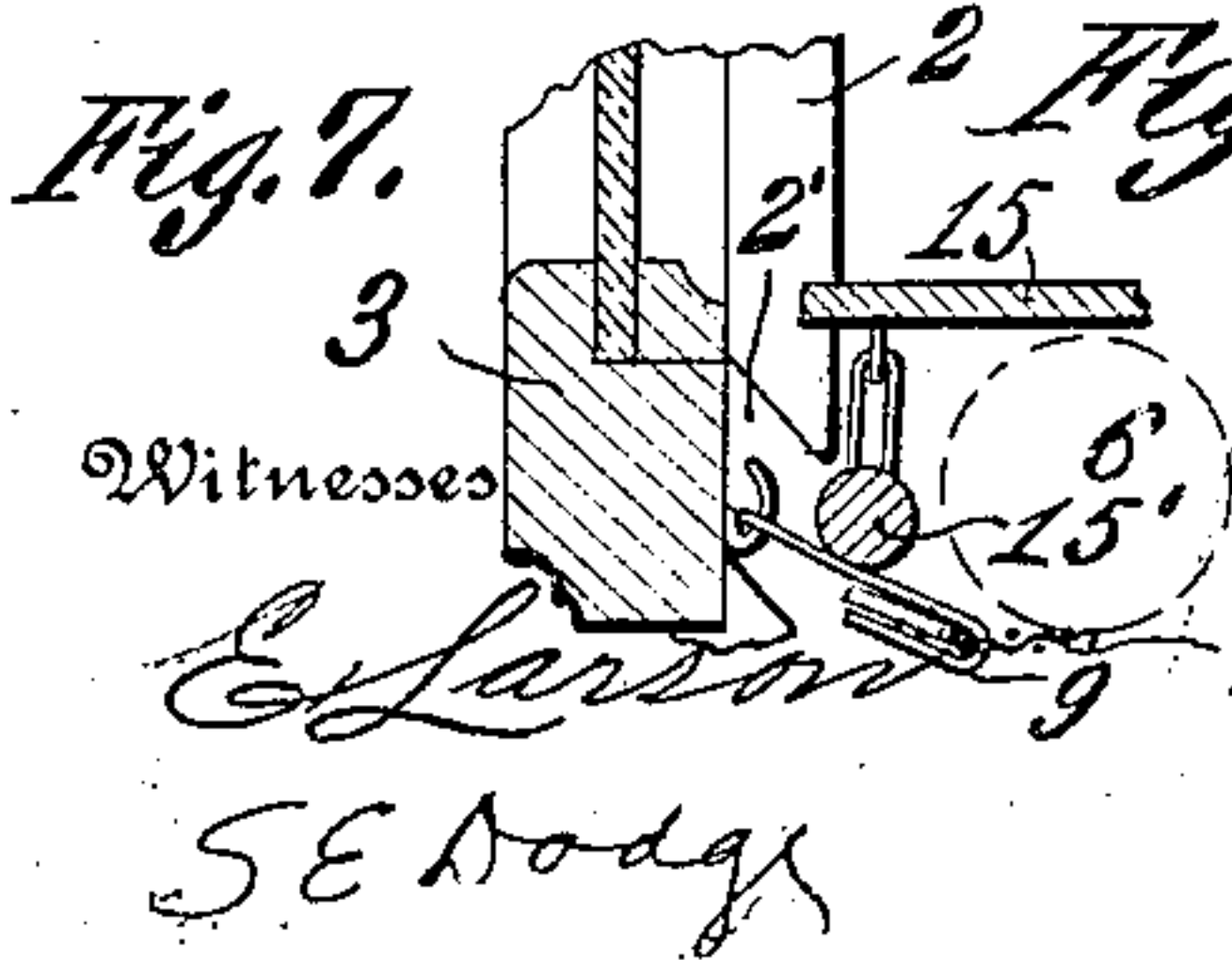


Fig. 7.

Witnesses

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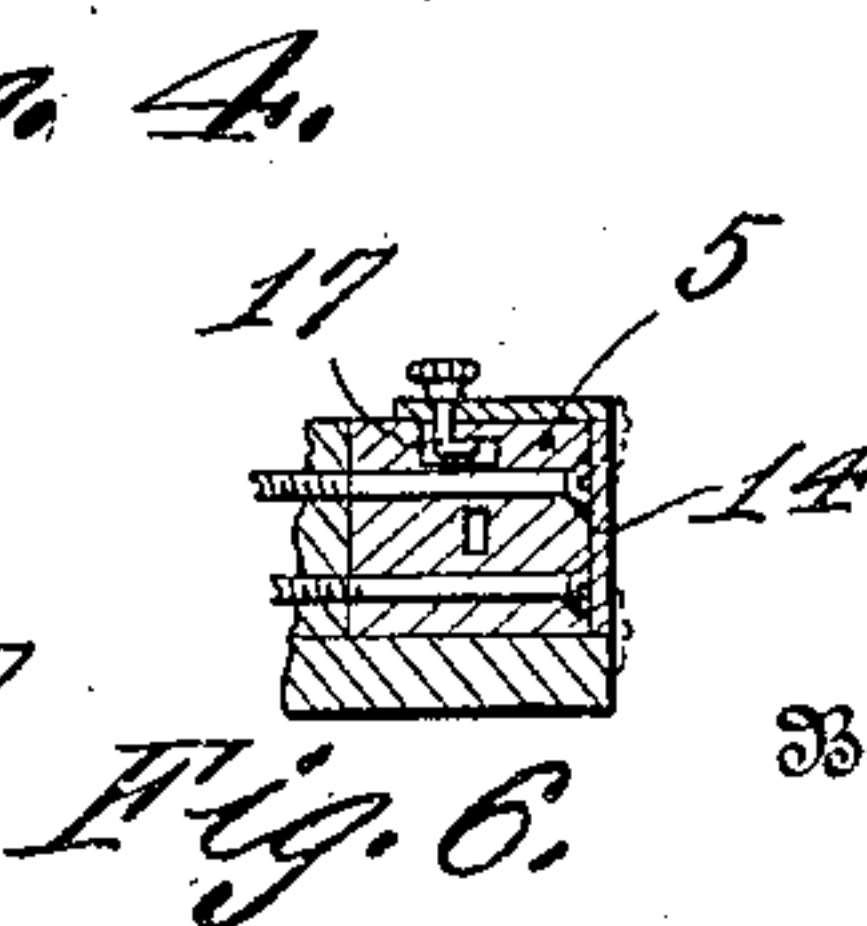


Fig. 6.

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WINDOW-SCREEN.

934,357.

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To all whom it may concern:

Be it known that I, AMANDUS R. RHOADS, a citizen of the United States, residing at West Chester, in the county of Chester and State of Pennsylvania, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

This invention relates to that type of screens for windows in which the screen is adapted to roll about a roller when mounted in operative position, the invention residing particularly in the peculiar arrangement of the screen and associated parts whereby certain advantages that will appear more fully hereinafter are derived.

For a full comprehension of the details of construction of the invention, reference is to be had to the following description, and to the accompanying drawings, in which:

Figure 1 is a front elevation showing a window frame partly broken away and with the invention arranged in operative position with respect thereto; Fig. 2 is a view similar to Fig. 1 showing the casing for the screen as opened to permit of access to the roller therein, and the screen itself being omitted; Fig. 3 is a vertical sectional view of the parts shown in Fig. 1; Fig. 4 is a front elevation, partly broken away, and showing the attaching plate connecting the screen and window; Fig. 5 is a sectional view on the line 5-5 of Fig. 4; Fig. 6 is a sectional view bringing out more clearly the fastening means for maintaining the casing parts in closed positions, and Fig. 7 is a fragmentary sectional view showing more clearly the position of the parts when the window sash is closed.

Throughout the following detail description and on the several figures of the drawings, similar parts are referred to by like reference characters.

Referring to the drawings and specifically describing the invention, the numeral 1 denotes the window frame which is provided at its sides with the usual guides 2 in which the sashes 3 are mounted. It is contemplated that the screen invention herein described be applied either to the upper end of the window frame for coöperation with the upper sash, or it may be used in connection with the lower portion of the window frame, as illustrated in the drawings, and coöperating with the lower sash. On the sill 4 of the frame 1 are arranged spaced brackets 5 in

which is mounted a spring roller 6 of a type similar to the ordinary shade rollers commonly in use, and adapted to wind about said roller 6 is a screen 7 which is made of fabric material of any suitable kind. One edge of the screen 7 is firmly attached to the roller 6, as at 8, while applied to the other end of the screen is an attaching plate or member 9. The plate 9 is preferably of U-form in cross section, the inner portion of said plate being cut away to provide a plurality of teeth 10 with which the screen material 7 is adapted to be engaged at one end whereby to secure the same to the member 9 in an effective manner. The attaching plate 9 is provided also with loops 11 of any suitable number and which are adapted to engage over hooks 12 applied to the lower portion of the window sash 3. From the roller 6, the screen 7 is adapted to pass at its opposite vertical edges through inclined slots 2' provided in the adjacent guides 2 of the frame 1, so that when the sash 3 is raised to open the window, the screen will assume a position in the space between the guides 2 between which said sash slides. To facilitate movement of the screen 7, the attaching plate 9 is provided at its opposite ends with small anti-friction rollers 13 which project slightly from the ends of the member 9 and operate in contact with the sides of the frame 1 to assist in guiding the screen in its movement when adjusted.

The roller 6 about which the screen 7 winds is housed in a casing consisting of an outer side 14 and a top 15, the side 14 being adapted to rest against the outermost portions of the brackets 5, while the top 15 is adapted to rest upon the upper sides of said brackets 5, as shown clearly in Fig. 6 of the drawings. Springs 16 connect the adjacent hinged portions of the members 14 and 15 of the casing and also connect the lower edge of the outer side 14 with the sill 4 of the frame 1, the tendency of said springs being to hold the side and top of the roller casing in closed positions, housing said roller. To positively lock the parts of the casing in the positions shown in Fig. 3, fastening members 17 are mounted in the top of the casing in a swivel manner and are provided at their upper ends with finger pieces while their lower ends have hooks to engage in slots in the top portions of the brackets 5. By turning the members 17 after their lower ends pass through the slots of the brackets 5, the parts of the casing

will be locked closed over the roller 6. To assist in guiding the screen from the roller 6 through the inclined slots 2' of the guides 2, a small guide bar 15' is applied to the top 5 15 of the casing at the inner edge of the latter and the screen 7 is in contact with said bar as it rolls upon or unrolls from the roller 6.

It will be seen that the guide bar 15' is secured to the top 15 of the casing so that it is free to swing downwardly and outwardly. When the screen is pulled upward by opening the sash, the contact thereof with the bar 15' swings the bar outwardly, as shown in 15 Fig. 3 of the drawings. However, when the window sash is closed and the screen is wound about the roller 6, the guide bar 15' drops to a pendent position. Interlocking staples may be employed to secure the guide 20 bars 15' to the top 15 of the casing, or other suitable means employed for the purpose.

Since the tendency of the roller 6, which is of the spring type, is to pull downwardly upon the sash 3 and roll the screen 7 about 25 said roller 6, it is desirable that a locking catch 18 be applied to the sash 3 to engage a rack plate 19 of the window frame, whereby the sash is automatically locked from downward movement as it is raised.

30 It is obvious that when it is desired to close the window, the catch 18 is disengaged from the plate 19 and on downward movement of the sash 3, the screen 7 will roll

about the roller 6, the plate 9 passing through the slots in the guides 2. To renew 35 the screen 7, the plate 9 is detached therefrom and said screen also detached from the roller 6 in an obvious manner. No tacks are employed preferably for securing the screen to the roller 6, a detachable fastening bar 8 40 being employed instead.

Having thus described the invention, what is claimed as new is:—

In combination, a window frame comprising guides and a sill, certain of the guides 45 being provided with inclined slots near the ends thereof, a sash mounted in the guides, a roller mounted on the sill, a casing housing said roller and comprising hinged parts, brackets in which the roller is mounted, fas- 50 tening members carried by one of the hinged parts of the casing to interlock with the brackets and hold the casing closed, a guide bar loosely carried by the top of the casing in proximity to the adjacent guides, and a 55 screen connected with the roller to wind and unwind with respect thereto and connected with the sash so as to operate in contact with the guide roller in its movement.

In testimony whereof I affix my signature 60 in presence of two witnesses.

AMANDUS R. RHOADS.

Witnesses:

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