No. 656,831. Patented Aug. 28, 1900.

G. A. YOULDEN.

WINDOW SCREEN.

(Application filed Jan. 20, 1900.)

(No Model.)

Fig. 1.

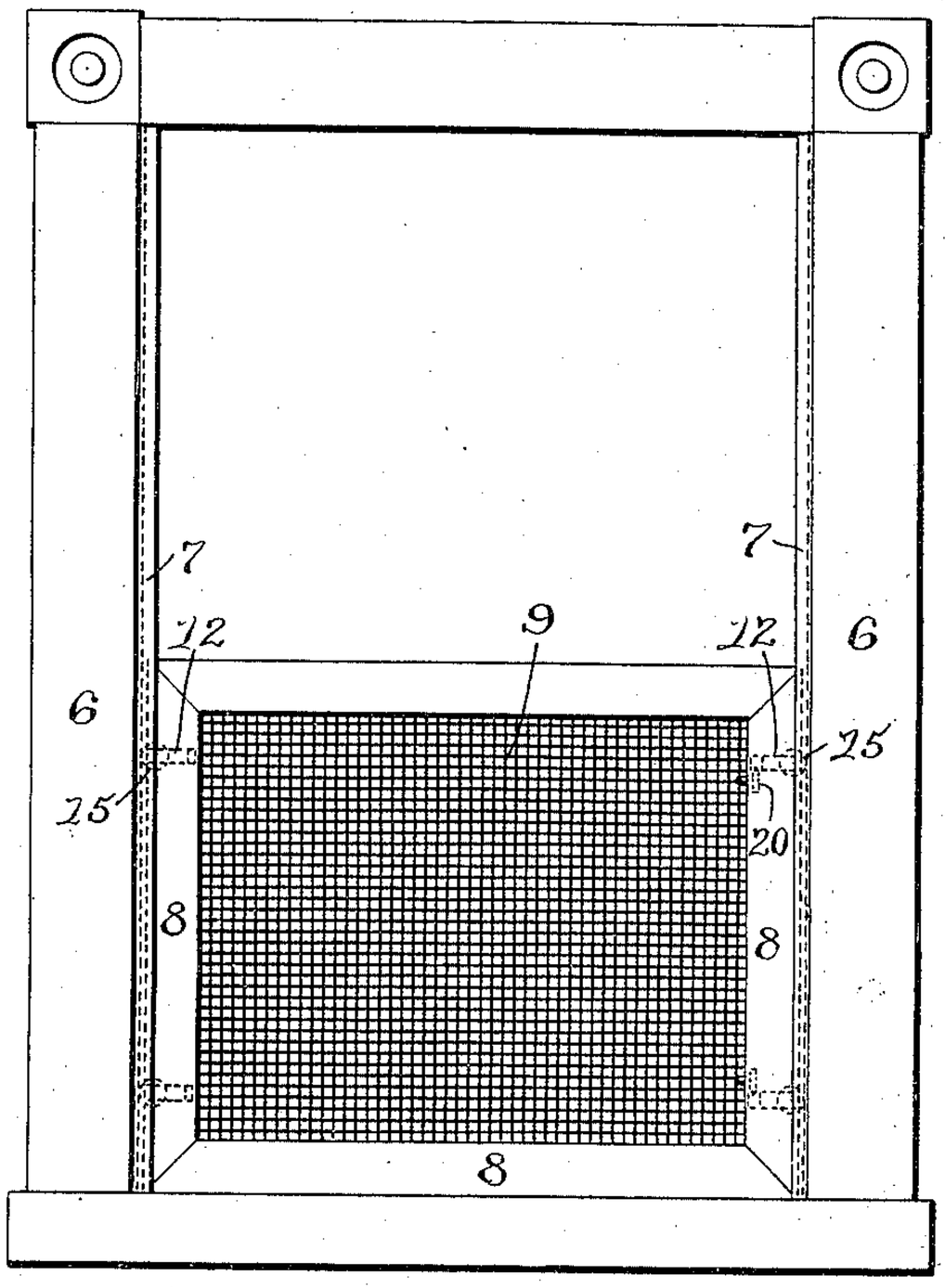


Fig. 2.

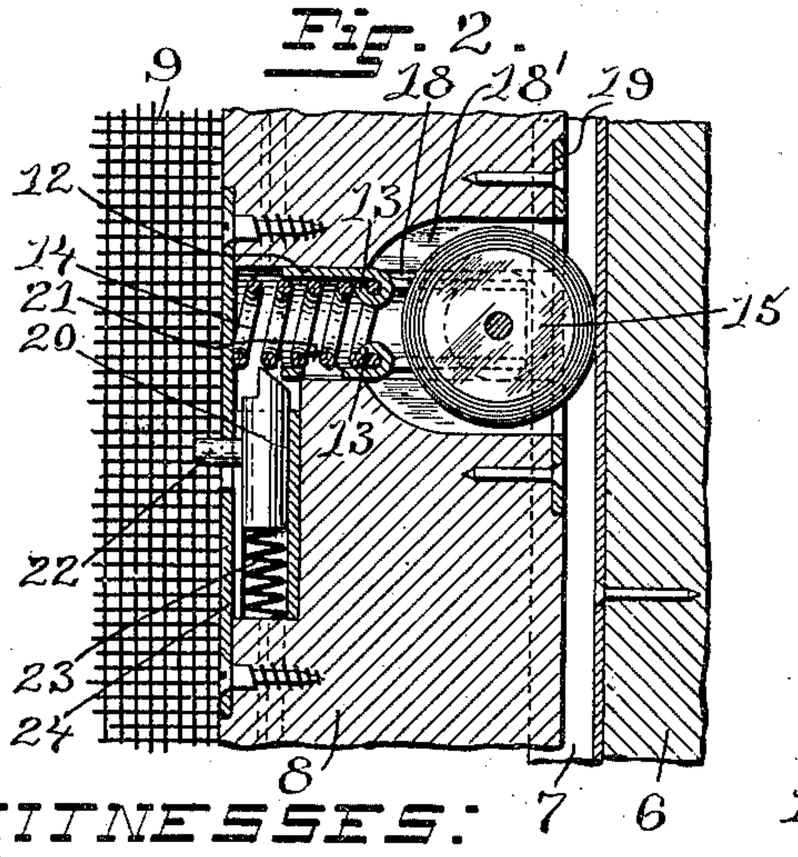


Fig. 3.

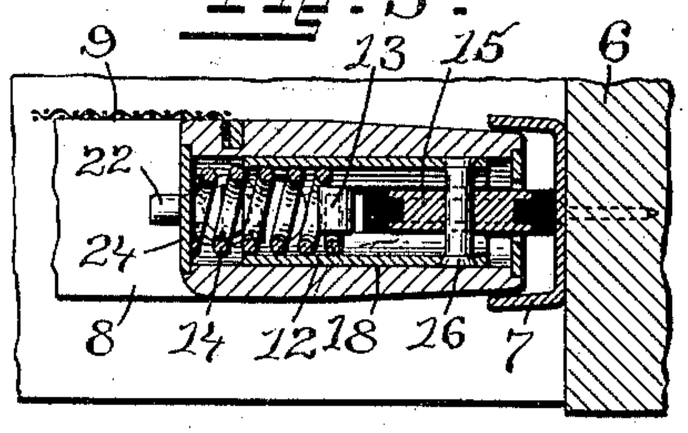


Fig. 4.

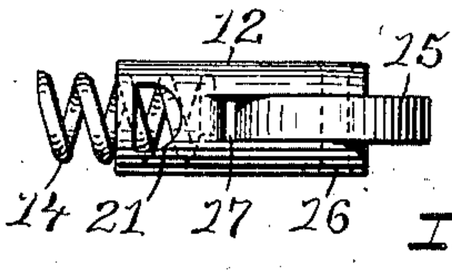
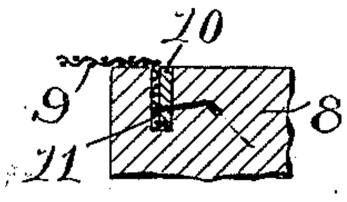


Fig. 5.



WITNESSES:

Chas. H. Luther Jr

B. M. Simms.

INVENTOR:

George A. Youlden

by Joseph A. Miller & Co.

Attys.

UNITED STATES PATENT OFFICE.

GEORGE A. YOULDEN, OF PROVIDENCE, RHODE ISLAND.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 656,831, dated August 28, 1900.

Application filed January 20, 1900. Serial No. 2,106. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. YOULDEN, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Window-Screens, of which the following is a specification.

This invention has reference to an improvement in window-screens used to prevent the entrance of insects, while freely admitting air.

The object of the invention is to facilitate the operation and adjustment of the screen as well as its ready removal.

The invention consists in the novel construction of the screen and the spring-pressed rollers used to guide and support the same, as will be more fully set forth hereinafter.

Figure 1 is a view of a window-frame provided with my improved screen. Fig. 2 is a sectional view of part of the window-frame and the screen-frame, showing a roller pivoted in a guide-tube and held in contact with the guideway by a coiled spring and a latch for locking the roller when the same is forced in from the face of the screen-frame. Fig. 3 is a transverse section of the parts shown in Fig. 2. Fig. 4 is a view of the guide-tube, the roller, and the coiled spring. Fig. 5 is a sectional view of the screen-frame, showing the means for securing the screen to the same.

In the drawings, 6 indicates the window-frame, and 7 7 the guideways secured on each side of the window-frame. These guideways are preferably formed of metal.

8 8 indicate the frame of the screen, and 9 the wire-cloth or other material which is laid flat over the width and height of the frame 8 8 and secured in place by forcing the strip or splint 10, of wood or metal, and the edge of the wire-cloth into the groove 11, the groove 11 being formed in the faces of the four sides of the frame, there being used four strips or splints for securing the four edges of the wire-cloth.

The guide-tube 12 is formed from a piece of metal tubing by cutting two slits across the same. The tongues 13 left on each side are turned inward and bent over the end coil of the coiled spring 14, as shown in Fig. 2. The rubber-faced roller 15 is pivotally secured in the slot 17, formed in the tube 12, by the pin 16.

On each side of the screen-frame two holes 18 are bored part way through the frame and the recesses 18′ cut out. Into these holes and recesses are placed the guide-tubes, which are provided with the coiled spring and roller, as shown in Fig. 4, so that they may freely move therein. A plate 19, having a slot which will allow the roller to project through it, is then secured to the edge of the side frame, thereby holding the roller, the guide-tube, and the coiled spring in place, and as the free end of the coiled spring abuts against the bottom of the hole the roller will be forced outward through the slot in the plate 19 against the guideway 7. On the opposite side of the screen there is provided a small latch for each of the rollers, so that in removing the screen-frame from the guideways the screen-frame is pressed against the guideways. The rollers on that side will then be forced inward, carrying the guide-tubes with them. The spring-pressed bolts 20 of the latches will enter the notches 21 cut in the sides of the guide-tubes and the two rollers on that side of the screen-frame will be locked in the frame and away from contact with the guideway 7. The screen-frame is then pressed on the opposite side against the guideway, when the screen may be removed. In replacing the screen the side not provided with the latches is first entered into the guideway and pressed inward to allow the opposite side to pass into its guideway. The pin 22 of the latch is then pushed to move the bolt 20 against the action of the spring 23 and out of the notch 21, releasing the guide-tube and allowing the spring 14 to force the roller into place and against the guideway.

In the form shown in Fig. 2 the hole for holding the spring and guide-tube is shown as bored through the screen-frame, in which case the plate 24 is used to hold the parts in place. This form is particularly adaptable where a narrow frame is used, but where a wide frame is used the hole for holding the guide-tube need not be bored but part way through the frame, and the latch may then be placed farther in from the surface, so as to coöperate therewith, substantially as shown.

A screen constructed after my invention is convenient in its operation, will support itself at any raised position, and can be readily removed from the window or replaced in position.

It is evident that for a cheap form of screen the rollers and latches on one side need not be used; but in such case that side of the frame will be held in contact with the guideway. The rollers in the opposite side must then be allowed sufficient movement to permit of their being forced into the screen-frame to allow the removal of the opposite side of the screen-frame from the guideway.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a window-screen, the combination with the frame 8, of the guide-tube 12 inserted into the frame, the notch 21 in the guide-tube, the roller 15 pivotally secured in one end of the guide-tube, the coiled spring 14 secured to the guide-tube by the tongues 13, the tongues 13, the slotted plate 19 secured to the frame, the spring-pressed bolt 20 coöperating with the notch in the guide-tube, and the plate 24; whereby when the roller is pressed inward the end of the spring-pressed bolt will enter the notch in the guide-tube and hold the same in the locked position, as described.

In witness whereof I have hereunto set my hand.

GEORGE A. YOULDEN.

Witnesses:

J. A. MILLER, Jr.,

B. M. SIMMS.