(No Model.)

P. H. NILES.

AUTOMATIC ADJUSTABLE WINDOW SCREEN.

No. 490,752. Patented Jan. 31, 1893.

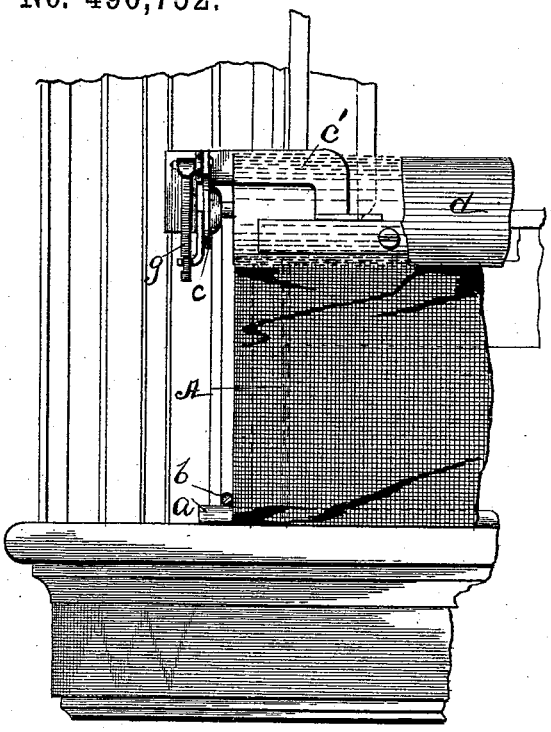

Fig. 1

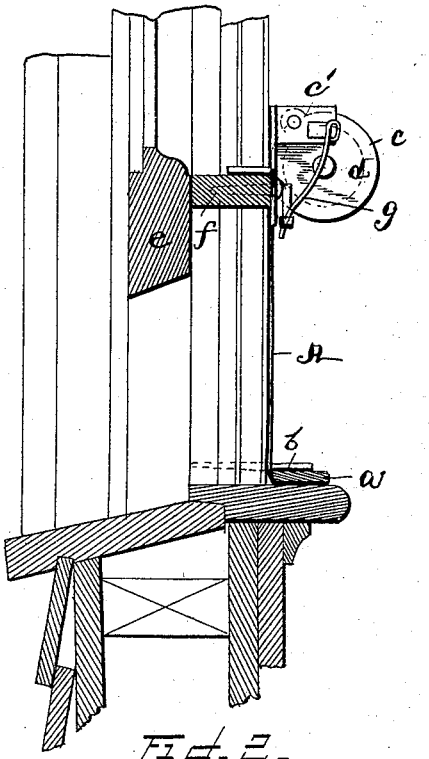

Fig. 2.

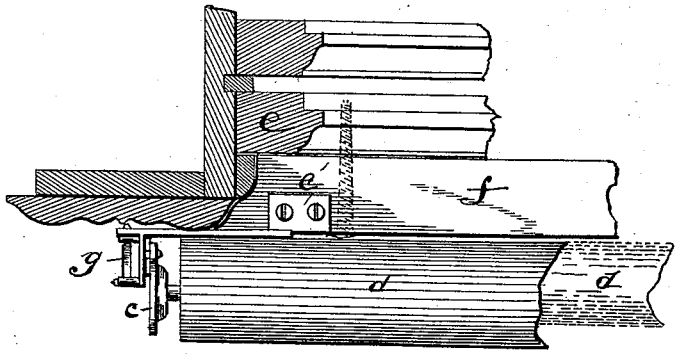

Fig. 3.

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UNITED STATES PATENT OFFICE.

PETER H. NILES, OF POTWIN PLACE, ASSIGNOR OF ONE-HALF TO A. M. LEGG, OF TOPEKA, KANSAS.

AUTOMATIC ADJUSTABLE WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 490,752, dated January 31, 1893.

Application filed September 2, 1891. Serial No. 404,573. (No model.)

To all whom it may concern:

Be it known that I, PETER H. NILES, a citizen of the United States, residing in the city of Potwin Place, in the county of Shawnee and State of Kansas, have invented a new and useful Improvement in Window-Screens, of which the following is a specification.

My invention relates to an automatically adjustable window-screen; and it has for its objects to provide a window with a screen which shall automatically unroll with the raising of the sash, effectually closing the opening made; to automatically roll up with the lowering of the sash, and to cause, at all times the side edges of the screen to lie flat against the window-casing, as will be hereinafter more fully described.

The invention consists in attaching the screen to a spring roller hung in swinging brackets pivoted to arms secured to a bolster which, in turn, is fastened to the bottom rail of the lower window sash; a spring holding the roller, and the attached screen, in close contact with the window-frame.

In the accompanying drawings:—Figure 1 represents, in elevation, one side of a window-frame and part of a sash, showing my improved roller-screen, partly broken away, attached thereto; Fig. 2, an end elevation of the same, partly in section, and Fig. 3 a top plan view, showing the window-frame and sash in cross-section.

Similar letters indicate similar parts throughout the several views.

A, indicates the screen having one end attached to a retaining-bar, *a*, which is held down upon the window-sill by means of studs or pins, *b*, and the other end to a spring-roller, *d*, upon which the screen is adapted to roll when the sash is lowered. The spring-roller is hung in swinging-brackets *c*, pivoted on arms or supports *c'*, secured to a bolster, *f*, which is fastened to the bottom rail of the sash and moves with the same. The roller is of the ordinary kind, being hollow for a portion of its length and provided with the usual spring coiled around and having one end secured to a spindle located in the hollow of the roller; the other end of the spring being attached to a collar secured in said hollow roller. The left hand swinging-bracket is slotted to receive the flat end of the aforesaid spindle, and the right hand swinging-bracket is perforated to receive the journal which is affixed to the right end of the roller. The roller with the screen attached is held in close contact with the casing of the window-frame by a spring, *g*, which has one end attached to the left hand arm or support *c'* and its free end bearing against a stud on the swinging-bracket. The function of the spring *g* is two-fold, serving to prevent any tendency of the bracket—due to the action of the coiled spring within the roller—to turn outwardly or away from the window-casing; and to force and hold the roller up against the casing and thereby keep the edges of the screen in constant contact with said casing during the unrolling and rolling of said screen.

From the above description it is evident that the raising of the sash will unroll the screen, and as the other end of the screen is secured to the window-sill, the opening thus made will be effectually closed. In lowering the sash, the tension of the spring—which has increased by the raising of the sash—will cause the roller to revolve, rolling up the screen. By withdrawing the retaining-bar from under the studs or pins, the connection between the screen and sill is broken and the roller will roll up the screen.

The device is simple and can be readily and quickly applied to a window without cutting or otherwise defacing the frame or sash. It can be readily removed when occasion for its use no longer exists, by removing the screws securing the bolster to the sash and the studs or pins holding the retaining-bar.

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

The combination with the window casing and sash, a bolster secured to the bottom rail of the sash and having its front surface flush with the front of the window casing, and arms or supports secured to said bolster, of a spring-actuated roller journaled in swinging-brackets pivoted to said arms or supports, the

screen having one end attached to the roller and the other to a bar removably secured to the window-sill, and a spring, one end of which is secured to one of the arms or supports and the free end bearing against a stud on one of the swinging brackets, whereby the roller and side edges of the screen are maintained in contact with the front face of the window-casing, substantially as specified.

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