

(No Model.)

J. A. SMITH.
ADJUSTABLE WINDOW SCREEN.

No. 573,365.

Patented Dec. 15, 1896.

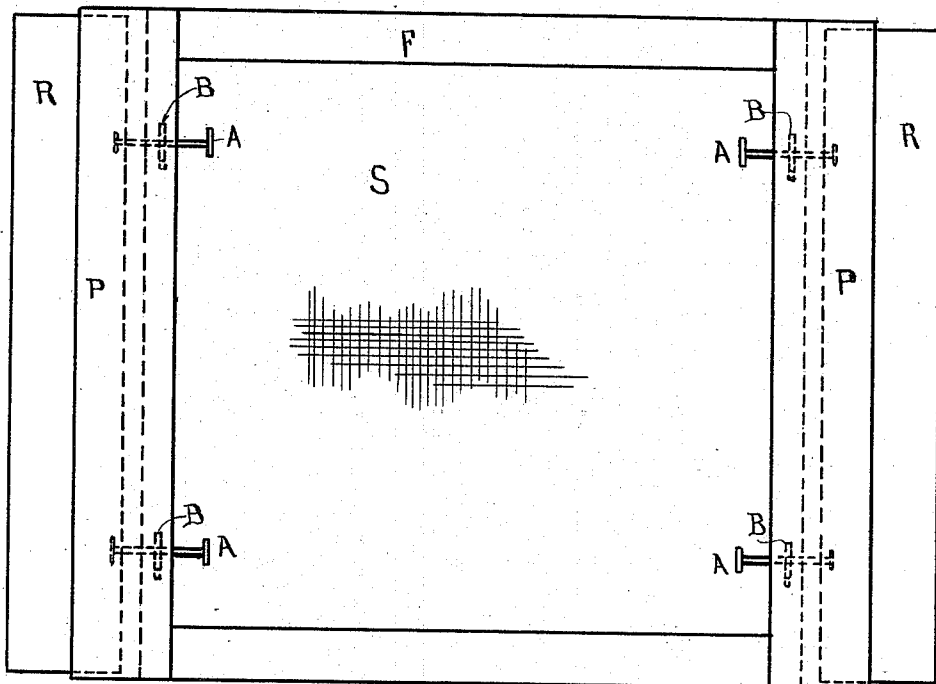


Fig. 1.

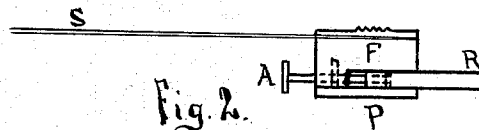


Fig. 2.

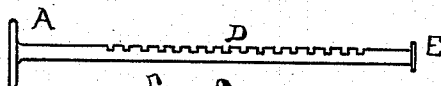


Fig. 3.



Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

JACOB A. SMITH, OF HOLLAND, MICHIGAN.

ADJUSTABLE WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 573,365, dated December 15, 1896.

Application filed August 20, 1896. Serial No. 603,391. (No model.)

To all whom it may concern:

Be it known that I, JACOB A. SMITH, a citizen of the United States, residing at the city of Holland, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Adjustable Window-Screens, of which the following is a specification.

My invention relates to that class of window-screens which are adjustable to fit different-sized windows by means of extensible sliding strips upon the sides of the screen; and its objects are to provide a simple and rapid method of adjusting these extensible strips and a simple and secure means for locking the same in any desired position. These objects are accomplished by the devices shown in the accompanying drawings, in which—

Figure 1 is a side plan view of the screen equipped with my devices. Fig. 2 is a horizontal cross-section of one side of the screen on a plane through the center of one of the locking-bolts. Fig. 3 is a detailed view of one of these bolts, and Fig. 4 is a detailed view of the locking-plate.

Similar letters refer to similar parts in the different views.

S represents the main body of the screen, covered with wire-cloth or suitable material and surrounded by the rectangular frame F. This rectangular frame carries upon its side extensible strips R R. These slide outwardly and inwardly in grooves provided in the side edges of the frame. I have found that a convenient method of providing this sliding engagement is to cut grooves upon the edge of one face of the frame and then to cover the other side of the extensible strip with a flat plate or strip, (shown by P in the drawings,) which may be of metal, and being thin is easily made flush with that surface of the frame F. The main frame F and this plate P then operate as lips holding extensible strips R and permitting the same to move freely toward and from the center of the screen.

I connect the extensible strips with the main body of the frame by means of the locking-bolts or keys A A, of which I prefer to use two upon each side, so that corresponding adjustment may be made at the top and bottom of each side. These bolts are of the form shown in Fig. 3, and each carries at its inner

end a thumb-piece or ring, as shown, for convenience in grasping and turning the same. These bolts pass through holes of corresponding shape and size bored in the sides of the main frame and should be attached to the extensible strips in such a way that they will operate the strips and extend or retract them and at the same time will revolve freely. I accomplish this by providing an enlargement of any suitable shape, as E in Fig. 3, upon the outer end of each bolt, which drops into a slot of corresponding shape in the extensible strip R. These locking-bolts are constructed commonly of round wire or iron, though their precise shape is not material. Upon one edge of the same, which will be the upper edge when the device is in its locked position, I cut a series of slots, (shown by D in Fig. 3.) If the bolt is round, each of these slots will be in form a segment of a circle. A more secure locking engagement is formed by constructing the slots of this shape, making the lower edge of the same straight. B is a locking-plate having a hole above its center of suitable size and shape to allow the locking-bolt to pass through. If the slots in the bolt are cut, as described, so that their lower side is a straight line, the upper side of the hole in the plate should be of a corresponding shape, as shown in Fig. 4, although it is obvious that this shape of the slot and the hole in the locking-plate is not essential, but is only adapted to secure more perfect engagement. These locking-plates are dropped into slots cut in the side pieces of the main frame at right angles to the direction of the locking-bolts, as shown in Fig. 1. These slots are large enough so that the locking-plates lie loosely therein.

The method of assembling and using my invention is as follows: With the screen lying upon its side I drop the locking-plates into the slots provided for them and pass the locking-bolts through the holes in the frame and through the holes in the locking-plates, dropping the enlargements upon the outer ends of the bolts into the slots provided therefor in the extensible strips. I then attach the plates or lips P, which make the other side of the groove for the extensible strip and which cover and close the slots in the main frame, receiving the locking-plates, and the slots in

the extensible strips receiving the enlarged ends of the bolts. If the screen is then raised into a vertical position, the same which it will occupy in the window, it is apparent that the locking-plates, having their center of gravity below the holes which receive the locking-bolts, will hang suspended downward therefrom, swinging freely in the slots provided therefor, and when the locking-bolts are so turned that the slots D are uppermost this plate will drop into the slot which is presented, and the bolt will then be locked so that it will not slide in either direction. A half-turn of the bolt will bring the slot D out of engagement with the locking-plate, and, presenting to the plate only the smooth edge or surface of the plate, being the same surface which was formerly underneath, the bolt can then be moved laterally in either direction as far as desired, and the extensible strip, the upper and lower bolts being operated, preferably, one with each hand at the same time, can be moved as far as may be desired within the limits provided, and can thus be very rapidly adjusted. When adjusted to the desired spot, a half-turn of each bolt, bringing the slotted edge again uppermost, gives opportunity for the locking-plates to engage with and drop into the slot in the bolt which happens

to be presented, and the bolts, and through them the strips, are firmly locked. For perfect operation the bolts should engage somewhat closely with the holes through which they pass or with the slots in which the ends are inserted, so that it will require a slight force to revolve them and so that they will not turn by accidental jarring.

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

In an adjustable screen the combination of the main frame, extensible side strips, locking-bolts, passing through holes in the sides of the main frame and engaging with the extensible strips and provided upon one edge with a series of slots, and the locking-plates adapted automatically to engage with the slots in the bolt and lock the bolt in any position, and to be disengaged by a partial turn of the bolt, substantially as shown and described.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

JACOB A. SMITH. [L. S.]

Witnesses:

A. C. DENISON,

AMBROSE C. HINDMAN.