E. P. POMEROY.

WINDOW-SCREEN.

No. 192,875. Patented July 10. 1877.

Fig 2

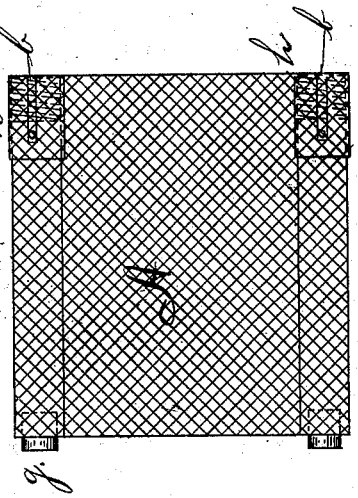
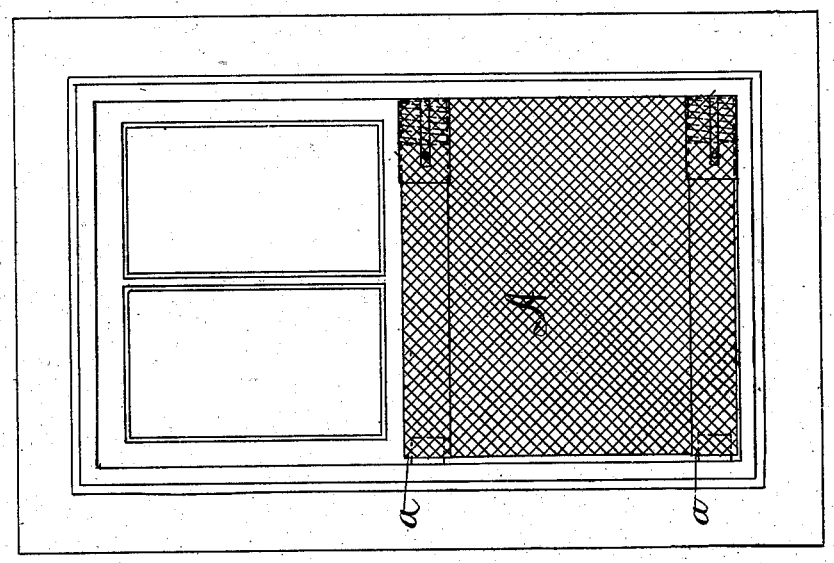


Fig 3

Fig 1



Witnesses
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EDWARD P. POMEROY, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN WINDOW-SCREENS.

Specification forming part of Letters Patent No. **192,875**, dated July 10, 1877; application filed April 26, 1877.

To all whom it may concern:

Be it known that I, EDWARD P. POMEROY, of Springfield, county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Adjustable Window-Screens, which improvement is fully set forth in the annexed specification and in the accompanying drawings.

The object of my invention is to provide certain improvements in window-screens, which are made to be held in position in a window by two spring-rollers, by which the springs in the rollers shall be so covered by a cap or tube sliding over them that neither the action of the springs nor the place they occupy in the rollers shall tend to wrinkle or displace the screen thereto attached.

A further object of my invention is to provide suitable cushions, attached to the ends of the rollers, whereby the necessary spring-pressure to be exerted between the ends of the rollers and window-casing, in order to retain the screen in place against the force of strong currents of air, can be had without the danger of making injurious indentations in the window-casings, as would be the case were the wood ends of the rollers or metal ends of the caps allowed to bear directly against the casings.

The roller ends being cushioned, a much weaker and more convenient spring to manipulate can be applied to the rollers, so that but little force is required to put the screens into, or remove them from, the window.

Furthermore, my screens can be instantly removed from the window and rolled into compact form, to be put aside when not wanted in the window, and can be constructed at so low a price as to bring it within the means of every one to purchase them. They require no fittings to be attached to the window-sill or jambs to hold them in place.

In the drawings, Figure 1 represents an ordinary window-frame and sash with one of my improved screens in it. Fig. 2 shows a screen removed from the window; and Fig. 3 is a longitudinal section of one of my screen-rollers.

I employ two rollers, *a a*, around or to which the ends of the netting or material A, forming the screen, are secured, the length of the screen being such as would be demanded to cover the entire opening of the part of the window lifted or dropped down, and the rollers are cut the proper length for the width of the window between the jambs.

On one end of the roller I put a metallic cap, *h*, with a longitudinal slot, *b*, Fig. 2, in it, and between the end of the roller and the interior of the head of cap *h* I place a spring, *i*, Fig. 3. The cap *h* is slipped over the end of the roller, with the spring inside of it pressed to compress the spring a little, and a tack or pin is driven through slot *b* into the roller to retain the cap in its place. In the opposite end of the roller I bore a cavity and insert in it a piece of rubber, *g*, or other flexible or frictional substance.

In placing the screen into a window, take hold of one roller, and, placing the cap end against one of the window-jambs, press against it until the other end will enter between the jambs, when it will stay in place, held by spring *i* in cap *h*, and by the rubber or frictional material in the other end.

Supposing the roller placed in the window-frame, as above described, to have been the lower one next the window-sill, and the window-sash only partially lifted up, the screen is, by the hand, rolled upon the upper roller until the unrolled portion is left of sufficient length to reach up and cover the opening, when the top roller is pressed into place, as described above in the case of the first one.

In case the screen is required to cover an opening made by dropping the upper sash only, remove the rollers by pressing them against the cap end, and insert the screen at the top of the window in the same way as directed for putting it in below.

In constructing my rollers I do not confine myself to putting the cap and spring on one end and inserting the rubber or other flexible substance in the other end, using both to retain the roller in place, for, under ordinary circumstances, the rubber inserted in one end of the roller and the other end simply sawed to the proper length for the width of the window and smoothed off, answers all purposes, or the cap and spring on one end and no rubber on the other end might answer.

In the case of the rubber on the roller with-

out the cap and spring, the roller does not so readily adjust itself to variations in the width of windows between the jambs. So, also, in case the cap and spring are used and no rubber is inserted in the roller, the wood end of the roller is more likely to deface the surface of the jams; therefore I prefer to make them with both cap and spring and rubber. To protect the face of the jams, against which the head of the cap presses, I cover the head with cloth, or other soft material, attaching it to the head or to the netting of which the screen is made.

When the ends of the netting are sewed to form a tube, into which to insert the roller, the caps *h* slide easily therein without displacing the netting; and when the screen is no longer required in the window it may be removed and closely rolled on one or both of the rollers and put away. Also, when the netting requires washing it can be slipped from the rollers, cleaned, and replaced upon them.

What I claim as my invention is—

The combination of the screen-netting A, rollers *a a*, caps *h*, springs *i*, slots *b*, with their tacks or pins, and rubber or other flexible material *g*, substantially as and for the purpose set forth.

EDWARD P. POMEROY.

Witnesses:
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