

(No Model.)

L. H. CONARD & A. R. COLLINS.
ADJUSTABLE WINDOW SCREEN.

No. 548,963.

Patented Oct. 29, 1895.

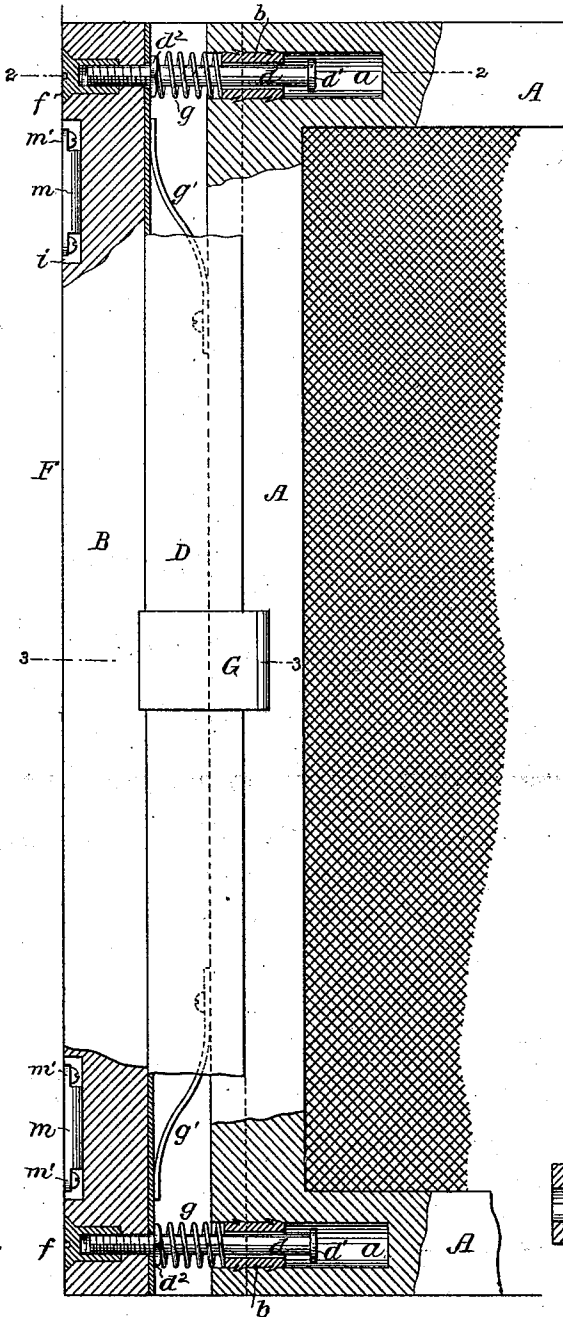


FIG. 1.

FIG. 3.

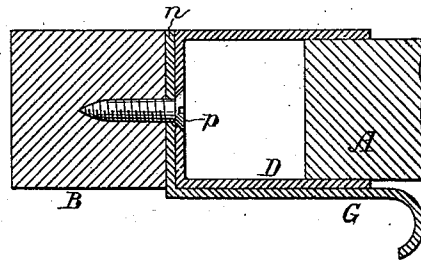


FIG. 4.

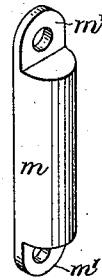


FIG. 5.

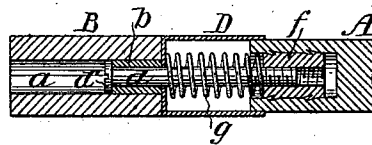
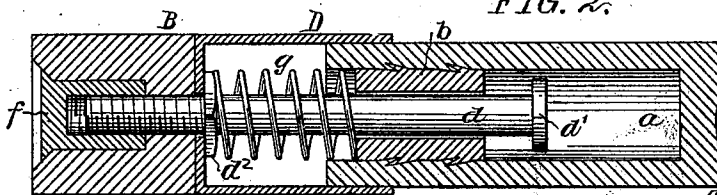


FIG. 2.



Witnesses:

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Howm & Howm

UNITED STATES PATENT OFFICE.

LINFORD H. CONARD AND ALFRED R. COLLINS, OF CAMDEN, NEW JERSEY.

ADJUSTABLE WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 548,963, dated October 29, 1895.

Application filed November 5, 1894. Serial No. 527,955. (No model.)

To all whom it may concern:

Be it known that we, LINFORD H. CONARD and ALFRED R. COLLINS, citizens of the United States, and residents of Camden, New Jersey, have invented certain Improvements in Adjustable Window-Screens, of which the following is a specification.

The object of our invention is to construct an adjustable window-screen which will be neat in appearance, convenient to manipulate, and strong, durable, and cheap in construction. This object we attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a side view, partly in section, of sufficient of a window-screen to illustrate our invention. Fig. 2 is a sectional plan view, on an enlarged scale, on the line 2 2, Fig. 1. Fig. 3 is a sectional plan view, on an enlarged scale, on the line 3 3, Fig. 1. Fig. 4 is a detached perspective view of one of the retaining-lugs for the screen; and Fig. 5 is a sectional plan view illustrating a modification of the invention.

A represents part of the fixed frame of the screen, to which the netting can be applied in any available manner, and B represents the adjustable side strip, to the inner side of which is secured the base of the bridging-strip D, the latter being of trough-like cross-sectional form, as shown in Fig. 3, and being composed, by preference, of sheet metal of a proper degree of stiffness.

In each corner of the frame A of the screen is formed a cylindrical recess *a*, into which is driven a short section of metallic tubing *b*, which has spurs or barbs formed upon it in order to prevent it from being accidentally forced out of place after it has once been inserted.

Passing through the tube *b* is a pin *d*, having at the inner end a head *d'* larger in diameter than the bore of the tube *b*, but less in diameter than the bore of the recess *a*, so that it can play freely to and fro in said recess, but cannot be withdrawn therefrom.

The outer end of the pin *d* is threaded and is adapted to an internally-threaded screw-plug *f*, which is of circular cross-section, and is let into a recess formed in the strip B for its reception, the plug being free to turn in this recess, so that by screwing it up on the

threaded pin *d* a nut *d*² on the latter may be caused to bear firmly upon the base of the bridging-strip D, so as to securely confine the pin to the strip B.

The projection of the strip B is effected by means of a spring *g* coiled around the pin *d*, or by means of a flat spring *g'* interposed between the frame A and strip B and secured to one of said parts, or by both of such devices, as shown in Fig. 1.

The tubes *b*, pins *d*, and screw-plugs *f* thus serve to secure the strip B to the main frame of the screen, the contact of the heads of the pins *d* with the inner ends of the plugs *b* limiting the extent of separation of the frame and strip.

The coiled spring *g* is the one which we prefer to use, and in order to provide a pocket for the reception of the inner end of said spring the tube *b* is driven into the recess *a* some distance beyond the outer end of the latter, in order that the inner end of the spring *g* may enter the pocket thus formed at the outer end of the recess and bear upon the outer end of the tube.

The outer end of the spring bears upon the base of the metallic bridging-strip D or against the nut *d*², as may be preferred, so that there is no wear such as might be caused by the movement of the ends of the spring in contact with wooden surfaces.

In the outer face of the strip B are formed recesses *i*, each of which is adapted for the reception of a retaining-lug *m*, secured to the inner guide-strip F of the sash-frame, said lug having at top and bottom projecting ears *m'* with openings for the reception of screws whereby the lug is confined to said strip F. By this means the screen is retained in its proper position in respect to the sash, and the latter can be raised and lowered without interfering with the screen.

If it is desired to provide, also, for the raising and lowering of the screen, the recess *i* may extend from top to bottom of the strip B, so as to permit of such movement, and more than two of the lugs *m* may be employed, or a single long lug may be used, the heads of the screw-plugs *f* in this case being flush with the bottom of the recess.

In order to facilitate the drawing inward of the side strips B, each of the same is provided

at or near the center with a hooked finger-piece G, also constructed, by preference, of sheet metal, the base *n* of this finger-piece lying between the base of the bridge-strip D and the inner face of the strip B, which is, preferably, recessed for the reception of the same, as shown in Fig. 1, a single screw *p* serving to secure the bases of both the bridge-strip and finger-piece to said strip B, as shown in Fig. 3.

By the use of the internally-threaded screw-plug *f* we provide a good bearing for the same upon the strip B and a firm hold upon the pin *d*, whereas if the pin had an internally-threaded opening for the reception of an externally-threaded screw the latter would have to be so small as to have but a limited bearing upon the strip unless, on the other hand, the pin *d* was made inordinately large in diameter.

A palpable modification of our invention is one in which the disposition of parts of the guiding and retaining devices is reversed—that is to say, the guide and stop tube *b* is carried by the strip B and the hollow screw-plug *f* by the frame A, as shown in Fig. 5, the objection to this plan being the excessive width of the strip B which it necessitates. The construction shown in Fig. 1 is therefore preferred in all cases.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. An adjustable window screen in which the fixed and movable portions of the screen are combined with tubes let into recesses in one portion of the screen and having portions engaging therewith in order to prevent their removal, guide and stop pins carried by the other portion of the screen, said pins passing through the tubes and having heads playing in recesses in the screen and engaging with the tubes, and springs for projecting the movable portion of the screen, substantially as specified.

2. An adjustable window screen in which are combined the fixed frame of the screen, the adjustable side strip, its hollow bridging strip, tubes adapted to openings in the top and bottom bars of the fixed frame, pins carried by the adjustable side strip, and passing through said tubes and having heads at the inner ends adapted to be retained by the tubes and to play in the openings beyond the same, and springs for projecting the side strip, substantially as specified.

3. An adjustable window screen in which the fixed and movable portions of the screen are combined with tubes contained in recesses in one part of the screen, hollow screw plugs carried by the other part of the screen, projecting springs, and guide and stop pins passing through said tubes and having heads playing in recesses in the screen and engaging with the tubes, the opposite ends of said pins being

threaded for engaging with said hollow screw plugs, substantially as specified.

4. An adjustable window screen in which are combined the main frame, the adjustable side strip, the hollow bridge strip, tubes adapted to recesses in the top and bottom bars of the main frame, guide and stop pins passing through said tubes, said pins being headed at their inner ends and threaded at their outer ends, and hollow screw plugs let into openings in the side strips and free to turn therein, said screw plugs engaging with the threaded ends of the stop pins, substantially as specified.

5. An adjustable window screen in which the fixed and movable portions of the screen are combined with guide and stop pins carried by one part of the screen, guide and stop tubes let into recesses in the other part of the screen, and coiled springs interposed between the fixed and movable portions of the screen and seated in pockets formed in one part of the screen, beyond the ends of the guide tubes, substantially as specified.

6. An adjustable window screen in which are combined the main frame, the adjustable side strip, the hollow bridge strip, tubes inserted into openings in the main frame, guide pins carried by the side strip and having at their inner ends heads for engaging with said tubes, and coiled springs surrounding said pins, the inner ends of said springs being contained within the recesses formed in the main frame and bearing upon the outer ends of the tubes inserted in said recesses, substantially as specified.

7. An adjustable screen in which are combined the main frame, the adjustable side strip and the bridge strip, springs for projecting said side strip, and lugs adapted to recesses in the side strip and having projecting ears whereby they are secured to the sash frame, substantially as specified.

8. An adjustable window screen in which are combined the main frame, the adjustable side strip and the bridge strip, and a finger piece having its base secured between the inner face of the side strip and the base of the bridge strip, substantially as specified.

9. The combination of the main frame, the adjustable side strip, the bridge strip, springs for projecting the side strip, tubes let into openings in the main frame, threaded guide pins adapted to said tubes and having heads at their inner ends, and tubular screw plugs and nuts adapted to the threaded portions of the guide pins, and serving to secure the same to the side strips, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

LINFORD H. CONARD.
ALFRED R. COLLINS.

Witnesses:

JOSEPH H. KLEIN,
FRANK E. BECHTOLD.