

(No Model.)

O. A. BINGHAM.
WINDOW SCREEN.

No. 601,625.

Patented Apr. 5, 1898.

Fig. 4.

Fig. 1.

Fig. 5.

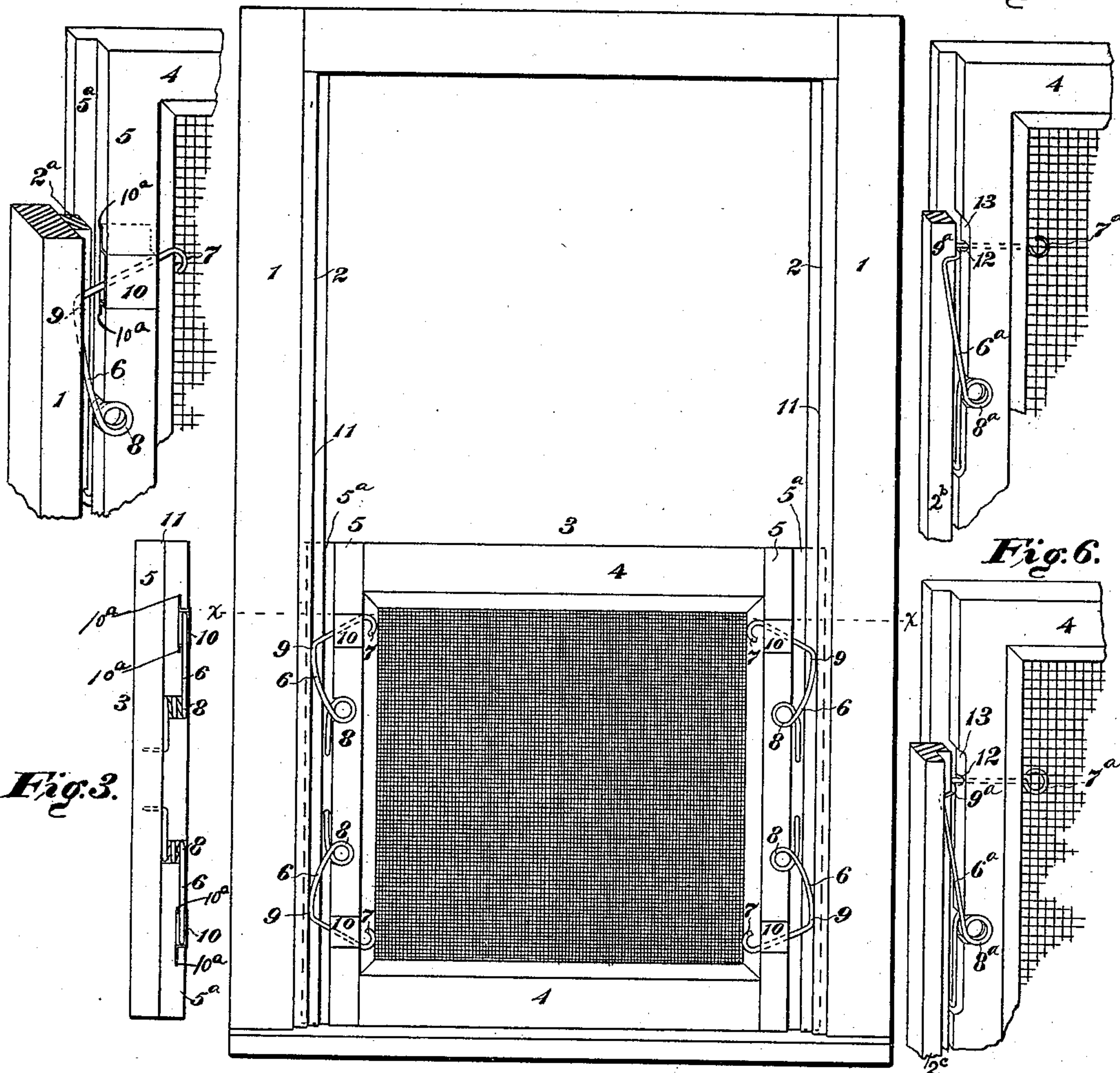


Fig. 3.

Fig. 2.

Fig. 6.

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WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 601,625, dated April 5, 1898.

Application filed December 2, 1896. Serial No. 614,195. (No model.)

To all whom it may concern:

Be it known that I, OSMORE A. BINGHAM, a citizen of the United States, residing in Keene, in the county of Cheshire and State of New Hampshire, have invented a new and useful Improvement in Window-Screens, of which the following is a specification.

My invention relates to window-screens, and has particular reference to screens of the kind that are movable longitudinally of the window-casing and are readily removable therefrom, though not limited as regards the feature of longitudinal movement.

The objects of my invention are to provide a screen which will be simple and inexpensive in construction, which may be readily placed in position and as readily removed when desired, which may be easily raised or lowered to any position without danger of becoming fixed in position by reason of the swelling of the woodwork in wet weather, which is self-supporting in any position to which it may be moved, and which may be readily adjusted to fit the bottom of the window-casing even though such bottom is not exactly at right angles to the sides of the casing.

With these objects in view I have devised the screen shown in the accompanying drawings, in which—

Figure 1 is a rear elevation of a window-casing and a screen constructed in accordance with my invention mounted therein. Fig. 2 is a transverse section on line xx of Fig. 1, a portion of the casing being broken away. Fig. 3 is a side elevation of the screen. Fig. 4 is a perspective view of a portion of a window casing and screen and showing a modified form of track-molding. Fig. 5 is a perspective view of a portion of a screen and track-molding of modified construction; and Fig. 6 is a view similar to Fig. 5, but showing a different form of track-molding.

Referring now particularly to Figs. 1, 2, and 3 of the drawings, 1 is a window-casing, and 2 are moldings fastened to the inner sides of the casing by means of nails or screws in such position as to serve as supports for the screen and also as guides or tracks when it is desired to raise or lower the screen.

The frame of the screen 3 comprises the top and bottom portions 4 of usual construction and side portions 5, each of which is cut away

to form a longitudinal rectangular recess 5^a. Each side is also provided with a plurality of wire springs 6, two being the number usually employed, as shown in the drawings. One end of each of these springs 6 is bent at right angles to its main portion and driven into the screen-frame, as is clearly indicated in Figs. 2 and 3, the other end being bent to form a hook or loop 7. Near the end which is inserted in the screen-frame the spring is formed into a coil 8 of one or more turns, and this coil is inserted into a corresponding recess in the frame. From the coil 8 the spring extends outward to form a bearing portion 9 for engagement with the track-molding 2, and thence inward to form the hook or loop 7.

The frame is cut away to form recesses for those portions of the springs between the bearing parts 9 and the hooks or loops 7, and these recesses are provided with metal covering plates or strips 10. These strips or plates have offset edges 10^a, which are driven or pressed into the wood of the frame at the sides and preferably near the bottoms of the recesses, so as to retain the strips firmly in position, as is clearly indicated in Figs. 3 and 4 of the drawings.

It will be observed that the screen-frame fits loosely in the casing and that the character of the springs 6 is such that the screen may be readily moved along the guiding-tracks to any desired position and that it may be tilted sufficiently to adjust the bottom of the screen-frame to the sill or bottom of the casing when the latter is not exactly level or at right angles to its sides. The screen may also be readily removed by drawing the springs at one side inward until the parts pass the inner edge of the track-molding. In order to draw the springs inward, the hooks or loops 7 may be grasped by hand or by any suitable implement. The number of turns in the coil 8 will depend upon the desired pressure to be exerted by the springs, such pressure being in all cases sufficient to insure the retention of the screen in any position to which it may be moved. As the pressure exerted by the springs is comparatively light and as a considerable range of movement is possible without material change in such pressure, the screen is not liable to become fixed in any position by reason of swelling of the

frame in wet weather. In the form just described the bearing portions 9 of the springs 6 bear against the ledge 11 of the track-molding 2, the narrow portion only of the molding being located between the screen-frame and the spring.

In Fig. 4 I have shown a construction which is the same in all respects as that already described, except that a plain rectangular molding 2^a is employed, which is located between the screen-frame and the springs. With this construction the bearing portions 9 of the springs rest against the window-casing 1.

In the forms thus far described the screen is intended to be located outside the window and fit against the outer sash, in which case the hooks or loops 7 are obviously located on the outside. While this form of screen may be located inside the window, if desired, it is not so readily inserted and removed as when located on the outside.

In Figs. 5 and 6 I have shown a form of screen adapted for location either inside or outside of the window, but more particularly adapted for the inside location. In this form of screen each of the springs 6^a is provided with a hook 7^a and a coil 8^a, corresponding to the parts 7 and 8, (shown in the other figures,) and is fastened to the frame in the same manner as the spring 6. The bearing portion 9^a is, however, bent laterally, so that the portion between it and the hook or loop 7^a extends through an opening 12 in the frame, which is so located as to bring the hook or loop 7^a on the side of the wire-cloth opposite to that on which the main portion of the spring and the track-molding are located. In this form the side portions of the screen-frame are preferably cut away to form recesses 13 for the springs. Either the plain track-molding 2^b (shown in Fig. 5) or the molding 2^c, having ledge, (shown in Fig. 6,) is well adapted to this form of spring.

In the form of screen just described, whether used on the outside or the inside of the window, the hooks or loops 7^a are readily accessible from the inside for the purpose of putting in and taking out the screen.

While I have described my invention as embodied in a sliding screen, I desire it to be understood that it is also useful in connection with removable screens which are not intended to be moved longitudinally.

I desire it to be also understood that my invention is not limited to the exact details of construction shown and described. For example, the guiding and retaining springs may be located at one side only of the screen, the other side being supported and guided by any other suitable means, and the number and form of such springs may be varied without departing from the spirit and scope of my invention.

I claim as my invention—

1. A window-screen provided with a plurality of retaining and guiding springs at one or both sides, each of which embodies a coil located in a recess and projects outwardly therefrom to form a bearing and thence inwardly through the frame, said outwardly-projecting portion being normally inclined with reference to the edge of the frame and separated laterally from said edge by a space adapted to receive a track-molding or flange.

2. A window-screen provided with a plurality of retaining and guiding springs at one or both sides, each of which embodies a coil of one or more turns located in a cylindrical recess in the frame and extends therefrom outwardly to form a bearing and thence inwardly through the frame, said outwardly-projecting portion being normally inclined with reference to the edge of the frame and separated laterally from said edge by a space adapted to receive a track-molding or flange.

3. A window-screen comprising a frame, one or both of the side portions of which has a plurality of guideways or recesses one side of each of which consists of a metal plate or strip having offset retaining edges embedded in the frame, and retaining and guiding springs each of which has one end inserted in the frame and extends outwardly at an acute angle to the edge of the frame to form a bearing and thence inwardly through the corresponding recess or guideway in the frame.

4. A window-screen frame one or both of the side pieces of which has a plurality of guideways or recesses, one side of each of which consists of a strip or plate having offset edges embedded in the frame, in combination with a plurality of springs each of which has one end rigidly connected to the frame and has a coil adjacent to said end which is located in a corresponding recess, said spring extending outwardly from said coil to form a bearing and thence inwardly through the corresponding recess or guideway.

5. The combination with a window-casing having a molding at each side, provided with a laterally-projecting ledge, of a screen-frame the extreme width of which is materially less than the inside width of the casing, said frame having a plurality of retaining and guiding springs at each side, each of which embodies a coil located in a recess in the frame and projects outwardly against the ledge of the molding and thence inwardly through a guideway in the frame, said outwardly-projecting portion being inclined with reference to the edge of the frame.

In testimony whereof I have hereunto subscribed my name this 27th day of November, 1896.

OSMORE A. BINGHAM.

Witnesses:

HIRAM BLAKE,
JACOB O. RICH.