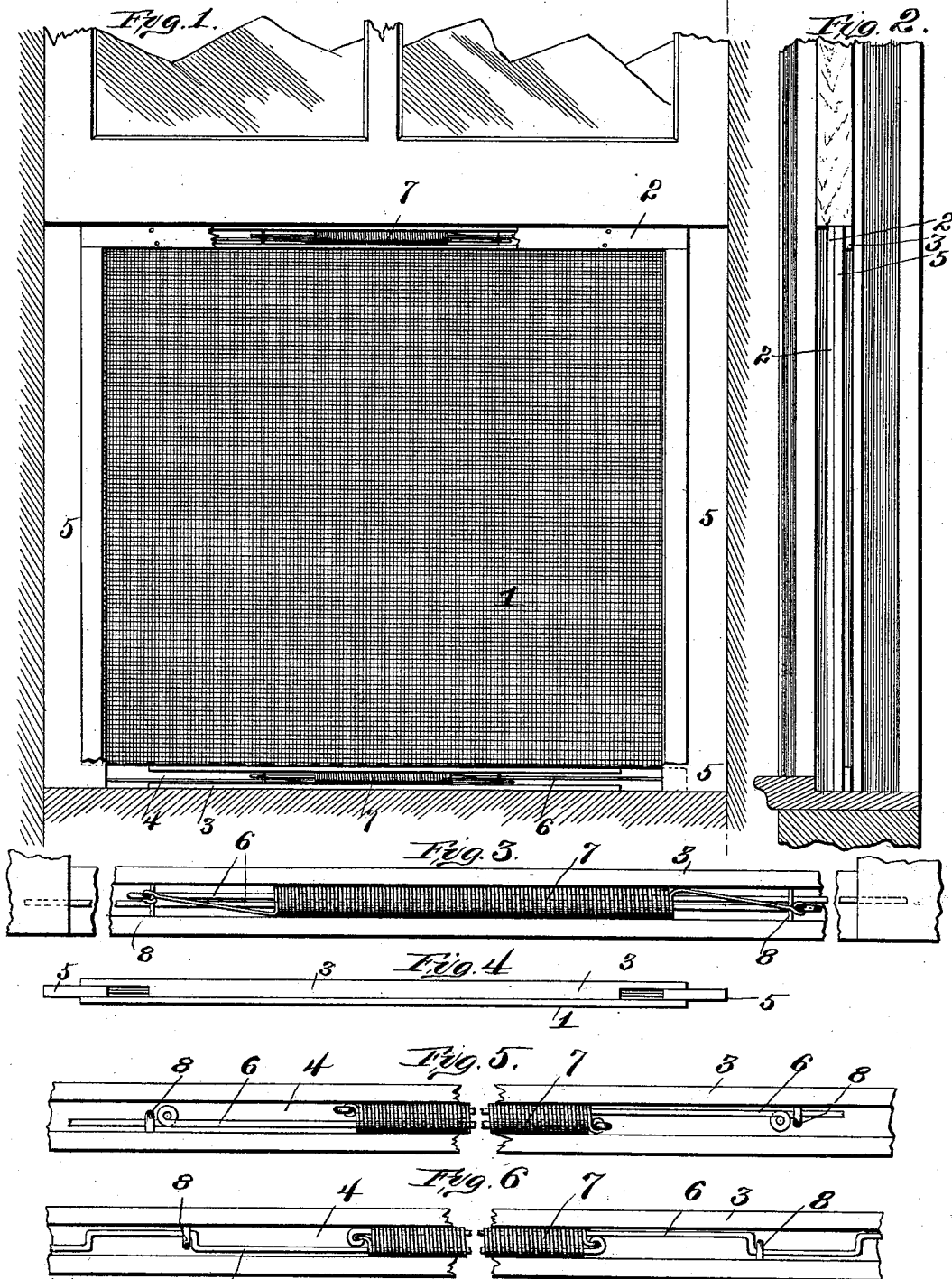


(No Model.)

W. LASAR.
ADJUSTABLE WINDOW SCREEN.

No. 523,044.

Patented July 17, 1894.



Attest:
Chas. A. Smith
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UNITED STATES PATENT OFFICE.

WALTER LASAR, OF ST. LOUIS, MISSOURI.

ADJUSTABLE WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 523,044, dated July 17, 1894.

Application filed September 29, 1893. Serial No. 486,817. (No model.)

To all whom it may concern:

Be it known that I, WALTER LASAR, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented a certain new and useful Improvement in Adjustable Window-Screens, of which the following is a specification.

My invention relates to window screens, and has for its object to improve the means of automatically adjusting the movable side strips to the width of the window to which said screen is applied, and to attain certain practical advantages hereinafter disclosed.

To this end, my invention consists principally in an extension spring applied to the screen frame and forming part thereof for spreading the side strips apart.

It also consists in the arrangements and details of construction hereinafter described and claimed.

In the accompanying drawings, which form a part of this specification, Figure 1 is a front elevation of the window screen with parts of the frame broken away to show the extension springs and their connections to the side wings. Fig. 2 is a side elevation of the window screen. Fig. 3 is an enlarged detail of an extension spring and connections. Fig. 4 is a plan of the window screen; and Figs. 5 and 6 are detail views illustrating modifications in the arrangement of the stops.

The wire cloth or screen fabric, 1, is fastened in the ordinary way to a rigid frame, 2. At the top and bottom of this frame, 2, are fastened strips, 3, of even length with the width of the frame, and provided with grooves, 4, on their inner faces. The inside end portions of each of these grooved strips, 3, are cut away, so that a recess is formed between the end of the strip and the corresponding corner of the frame. Side strips or wings, 5, fit loosely in corresponding recesses, and each is provided at each end with a stiff rod, 6, extending inwardly through the groove in the corresponding top or bottom strips. Inside of the grooves in the top and bottom strips, are extension springs, 7. These springs are helically wound wires terminating in eyes at both ends. The inwardly extending rods, 6, pass entirely through the corresponding helical springs and likewise terminate in eyes, by

means of which they are connected to the farther ends of said wire springs.

Nails or other stops, 8, one for each rod, are located on the grooved strip between the spring coil and the eye of the corresponding rod, in a position to be struck by the eye on the rod when the rod is drawn back by the spring. This stop prevents too great outward movement of the side wing, while the shoulder of the grooved strip at the end of the recess limits its inward movement. The side wings are therefore free to move laterally within the recess, but the stop and the shoulder fix the limits of such movement. The grooves should be made large enough to insure against binding, in case the ends of the side wings should be moved unevenly.

In the modifications shown in Figs. 5 and 6, the stops for the respective rods are located between the coil and the corresponding side wings; in Fig. 5 a turn in the wire rod co-operates with the stop, and in Fig. 6 the wire rod has two offsets, serving to limit the movement in both directions.

The operation of the device is as follows: Normally the side wings are spread apart as far as the stops will permit. To apply the screen to a window, the side wings are shoved inwardly by hand, thereby shortening the width of the screen, so as to allow it to pass the outside strip of the window. When the pressure is removed from the wings, the springs pull upon the ends of the stiff rods and the side wings are shoved apart till they strike against the window frame.

The most important practical advantage of my construction is that it permits the use of an extension spring, that is, a helical spring whose ends are separated farther in use than their normal distance, whereby, in use, the force of the spring tends to shorten the distance apart of such ends. Such a spring is more satisfactory and efficient in operation and more durable than any other means known to me of automatically adjusting the side wings.

What I claim as new, and desire to secure by Letters Patent, is—

1. A window screen comprising a frame provided with a screen fabric, movable side wings and extension springs said side wings being

connected to said springs at the ends thereof farthest from said wings respectively, substantially as described.

2. A window screen comprising a frame provided with a screen fabric, movable side wings and a helical extension spring, each of said wings being provided with a stiff rod which passes entirely through said helical spring and is connected to the farther end thereof, substantially as described.

3. A window screen comprising a frame provided with a screen fabric, grooved strips at the top and bottom thereof having helical extension springs therein, movable side wings, and rods connected to said wings and passing through said springs and connected to the far ends thereof respectively, substantially as described.

4. A window screen comprising a frame provided with a screen fabric, movable side wings

and a helical extension spring, each of said wings being provided with a stiff rod which passes entirely through said helical extension spring and is connected to the farther end thereof, and stops for limiting the movement of said wings, substantially as described.

5. A window screen comprising a frame provided with a screen fabric, grooved strips at the top and bottom thereof having helical extension springs therein, movable side wings fitting in recesses formed at the ends of said grooved strips, rods connected to said wings and passing through said springs and connected to the far ends thereof respectively, and stops cooperating with said rods, substantially as described.

WALTER LASAR.

Witnesses:

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