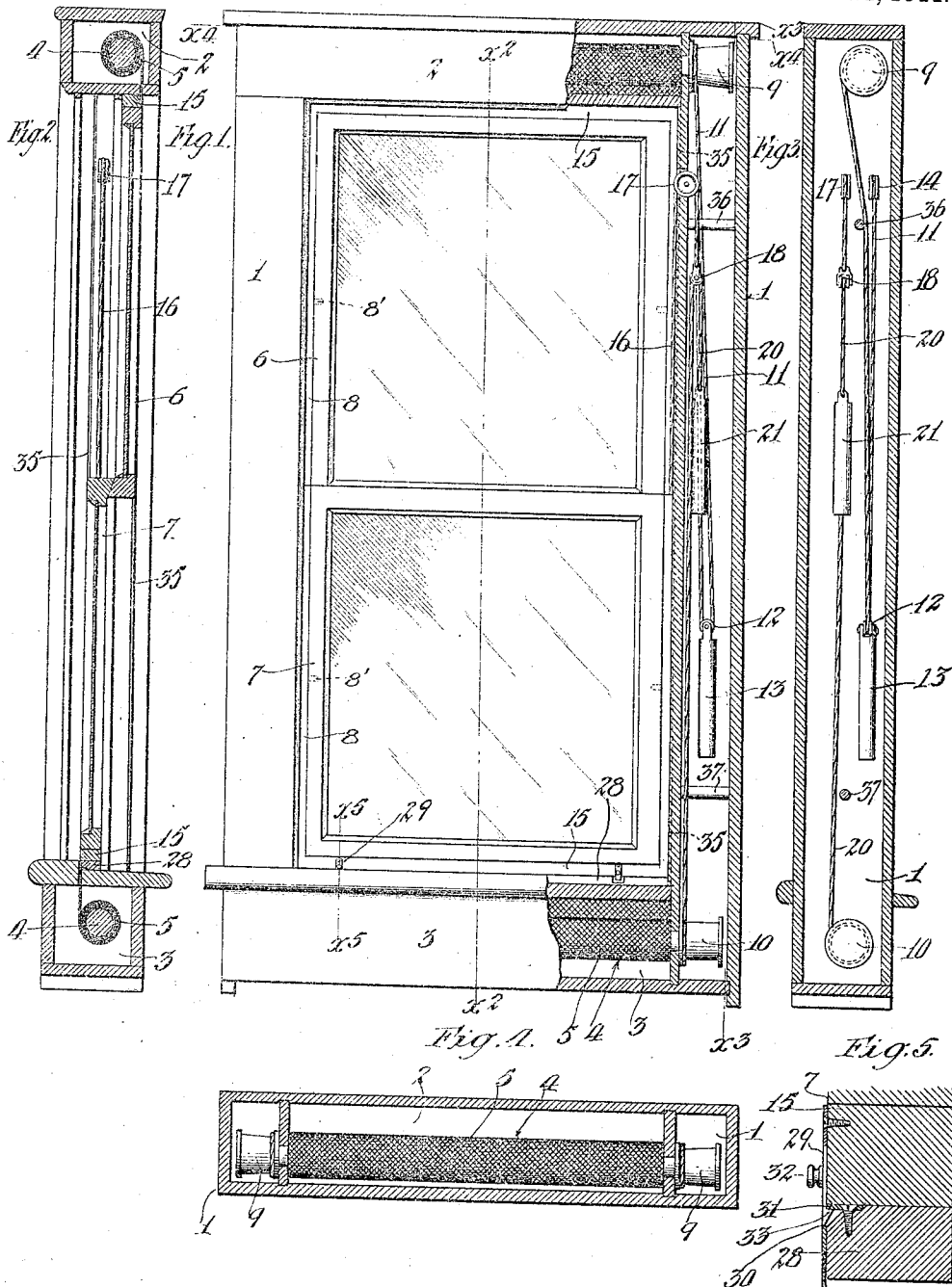


W. THOMPSON.
WINDOW SCREEN.
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987,654.

Patented Mar. 21, 1911.



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UNITED STATES PATENT OFFICE.

WILLIAM THOMPSON, OF LOS ANGELES, CALIFORNIA.

WINDOW-SCREEN.

987,654.

Specification of Letters Patent.

Patented Mar. 21, 1911.

Application filed February 21, 1910. Serial No. 545,212.

To all whom it may concern:

Be it known that I, WILLIAM THOMPSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Window-Screen, of which the following is a specification.

This invention relates to window screens of the type in which a flexible screen is provided which is drawn into position to occupy the space when the sash is open, and is automatically withdrawn from such space as the sash is closed. Such a screen is disclosed in my Patent No. 535,930, dated March 19, 1895, the present invention being an improvement on the construction therein disclosed.

The main object of the present invention is to provide means for detachably securing the flexible screen to the sash so that the screen and sash may be worked together or may be operated separately as desired.

Another object of the invention is to provide improved means for operation of the screen and particularly for maintaining the screen in a suitable condition of tension.

A further object of the invention is to provide a screen of this character with means for guiding the same accurately in its vertical motion and for maintaining the closure at each side of the screen so as to prevent entry of flies, etc., at such parts.

The accompanying drawings illustrate the invention, and referring thereto:—

Figure 1 is a front elevation of the window with parts broken away to show the interior construction. Fig. 2 is a vertical section on line x^2-x^2 , Fig. 1. Fig. 3 is a vertical section on line x^3-x^3 , Fig. 1. Fig. 4 is a horizontal section on line x^4-x^4 , Fig. 1. Fig. 5 is a detail vertical section on the line x^5-x^5 , Fig. 1.

The window frame comprises vertical side members 1, and top and bottom members 2, 3, each of said side members being hollow. Rollers 4 are rotatably mounted in the top and bottom members 2, 3 and flexible screens consisting for example, of wire cloth, indicated at 5, are secured to and wound on said rollers and fastened at their ends to the respective sashes. Said sashes are shown as reversible, being provided with guide strips 8 to which the sashes 6, 7 are pivoted at 8', and said guide strips being connected by cross bars 15 and adapted to slide vertically in the window casing, being guided on the

usual guiding means on said member 1, and provided with counterweight means. Said counterweight means are also utilized for the retraction or tensioning of the window screens and for this purpose the rollers 4 are provided respectively with drums 9, 10 connected to the counterweight means. In the case of the upper roller the drum 9 thereof is connected to a cord 11 wound around said drum and passing downwardly under a pulley 12 on a counterweight 13, and then upwardly over a pulley 14 on the side member 1 of the casing; the farther end of said cord being attached to the side bar 8 for the upper sash so that the weight 13 tends both to hold the upper sash closed and to wind up the upper screen.

The side bar 8 for the lower sash 7 is connected to cord 16 passing over pulley 17 and provided with a loop or pulley 18 at its end, and the drum 10 of the lower screen 5 is connected to a cord 20 passing over the loop 18 and is connected to a counterweight 21.

The connection of the lower screen to the lower sash may be made detachable, an intermediate bar 28 being provided connected to the lower screen 5 and spring catches 29 being attached to the inner face of the bottom bar of the lower sash and provided with hooks 33 engaging slots 30 in a metal plate 31 attached to the bar 28 and normally holding the screen and sash in connection. When it is desired to release the screen from the sash, the spring catches 29 are drawn forward by means of buttons 32 thereon to release their hooks 33 from the slots 30 so that the lower sash may be raised without throwing up the lower screen. It will be understood, however, that any suitable detachable connection may be provided between the screen and sash.

In the above described application of the invention to reversible sashes the cross bars 15 of the guiding means 8 serve also as means for connection of the screens, as above described. The connection of the cord 20 by means of the pulley 17 not only serves to sustain the lower sash and tension the lower screen, but also takes up any stretch in the window cord.

The wire cloth screens are preferably somewhat wider than the window spaces in which the sashes 6, 7, slide, the side members 1 of the window frame being provided with vertical grooves or channels 35 in which the edges of the screens 5 are guided and closely

confined, thereby preventing buckling of the screens and also forming an effectual closure or bar to the entrance of any flies.

Upper and lower guide rollers 36 and 37, respectively, are provided for cords 11 and 20, which serve as guides for the weights and prevent them from coming into contact with each other.

What I claim is:—

10 In combination with a window frame, a sash sliding therein, a flexible screen detachably connected to said sash, a roller on which said flexible screen is wound, a pulley in the window frame, a cord connected to the sash
15 and passing over said pulley, a pulley at the other end of said cord, a drum connected to

said roller, a second cord connected at one end to said drum and passing over said pulley at the end of the first cord, and a counterweight at the other end of said second cord, whereby both of said cords are put under conditions of tension tending to draw the sash and screen in opposite directions and maintaining the screen in condition of tension.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 14th day of February 1910.

WILLIAM THOMPSON.

In presence of—

ARTHUR P. KNIGHT,
FRANK L. A. GRAHAM.