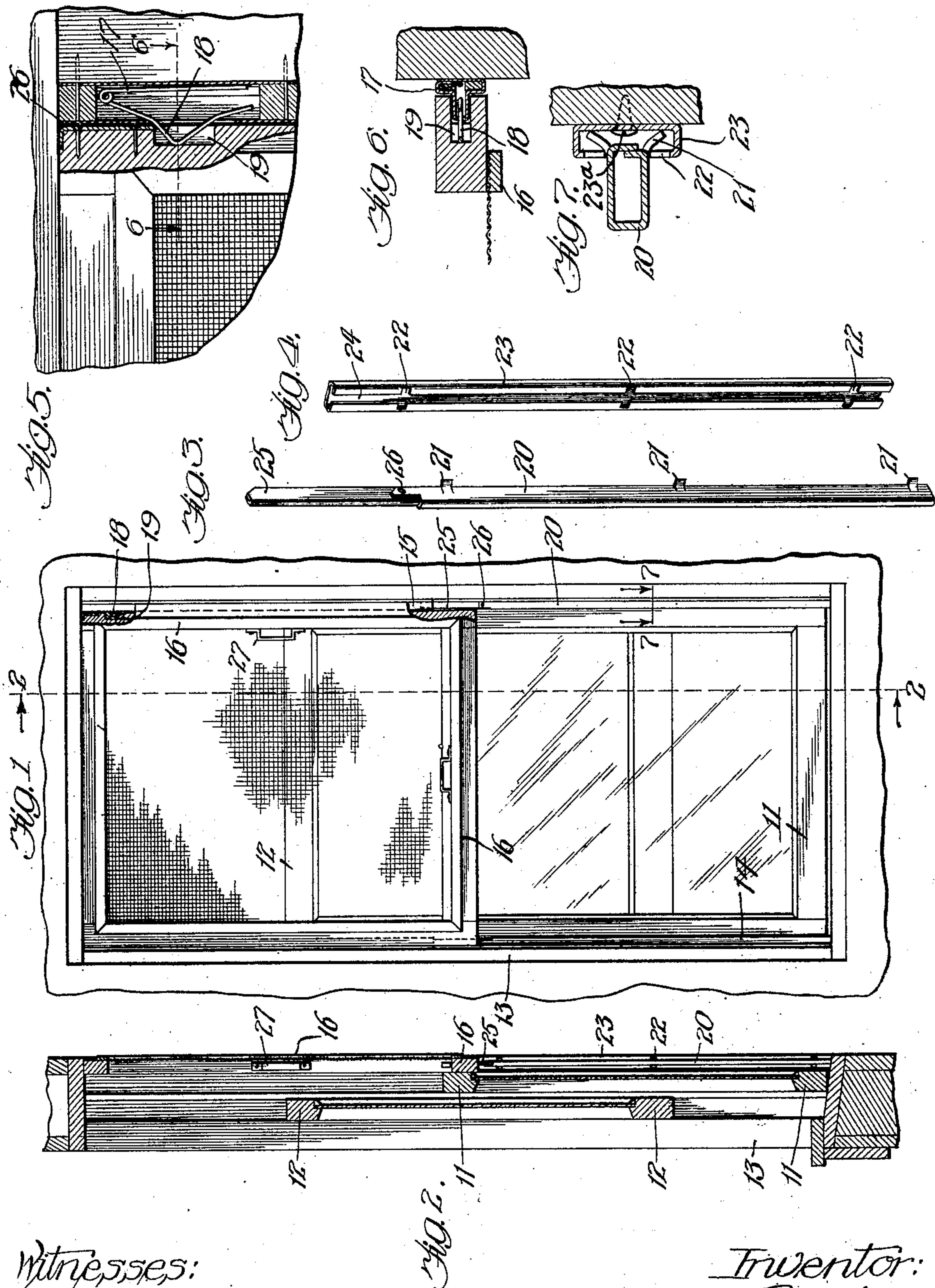


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WINDOW SCREEN.  
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978,838.

Patented Dec. 20, 1910.



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# UNITED STATES PATENT OFFICE.

PAUL R. BREITHER, OF CHICAGO, ILLINOIS.

## WINDOW-SCREEN.

978,838.

Specification of Letters Patent.

Patented Dec. 20, 1910.

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*To all whom it may concern:*

Be it known that I, PAUL R. BREITHER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention relates to window screens, and has particular reference to sliding screens covering only a part of the window.

During the summer it is customary to provide window openings with screens of some kind in order to prevent the entrance of various kinds of insects. In the case of the usual form of screen which is employed, it is not possible to lower the upper window sash and place the screen in the upper position so that entrance of insects will be prevented. In order to make provision for lowering the upper sash, and at the same time keeping the opening thoroughly screened, it is usual to use a full length screen which covers the entire window opening. The use of such a screen is not thoroughly satisfactory, however, in that it is considerably more expensive than a screen partially covering the window opening, and at the same time it is very difficult, if not impossible, to wash the outside of the window unless the screen is removed.

According to the system which I use, the screen may be raised into its upper position and held there by means of a special retaining device. The upper window sash may then be lowered and its upper portion forms a tight joint with the frame of the screen. In order to make it possible to move the screen into this upper position, it is necessary that the guides on which the screen ordinarily operates, should extend to the top of the window frame. It will therefore be apparent, that in order to remove the screen from the window, some means should be provided by which a portion of the guides which control the movement of the screen, should be capable of being removed. I accomplish this result by constructing the lower part of the guide on one side of the window frame so that it may readily be removed when the window screen is held in its raised position by means of the retaining device which will be described in detail hereafter. These and other advantages of my invention will be more apparent by reference to the accompanying drawings, in which:

Figure 1 is a front elevation of the win-

dow showing my screen in its raised position. Fig. 2 is a vertical section on the line 2—2 of Fig. 1. Fig. 3 is a perspective view of a hinged removable tongue section of one of the guides. Fig. 4 is a perspective view of a portion of a guide with which the tongue section of Fig. 3 is adapted to be engaged. Fig. 5 is an enlarged fragmentary view partly in section showing the spring retaining device for holding the screen in its raised position. Fig. 6 is a fragmentary section on the line 6—6 of the Fig. 5. Fig. 7 is an enlarged fragmentary section on the line 7—7 of Fig. 1.

An upper window sash 11 and a lower window sash 12 are adapted to be operated according to the usual system within a frame 13. Outside, that is in front of, the upper window sash 11, is provided a pair of screen guides 14 and 15 which extend throughout the entire vertical length of the window opening. These guides are preferably of the tongued type and are adapted to cooperate with corresponding grooves in the window screen 16. The guides which I have mentioned are preferably made of metal which is bent or pressed into suitable shape.

Near the upper portion of the screen guides 14 and 15, is provided a spring 17, on the movable portion of which is an angular portion or hump 18, which projects through a suitable opening in each of the screen guides. Each side of the screen 16, near its upper end, is provided with a recess 19, which is adapted to be engaged by the hump 18 of the spring 17. When the screen is moved to its upper-most position, the two springs 17—17 thus act as a retaining device to prevent downward movement of the screen 16.

The lower portion of the screen guide 15, is constructed in such manner that the tongue of the guide is removable, the preferred construction which I use being clearly indicated in Figs. 2, 3, 4 and 7. A tongue portion 20 is provided with a number of projections 21 which are adapted to engage with openings 22 cut in a metallic retaining member 23, which is secured to the window frame in any suitable manner as by screws 23<sup>a</sup>. This retaining member is formed in such manner that an interval is left between its edges to form a longitudinal slot 24. The tongue member 20 is inserted in the slot 24, projections 21 passing through the openings 22. The tongue member is then



pressed downwardly so that the projections 21 no longer register with the openings 22 and the tongue is thereby securely held in position. In order to make the tongue of the guide member continuous, however, and in order to afford further means for retaining it in position, I have provided a hinged extension 25 pivotally connected with the tongue 20, at the point 26. The upper portion of the hollow tongue of the screen guide 15 is left open at its lower end so that the extension 25 may be slipped upwardly within this tongue, the main portion 20 of the removable tongue section being set at an angle with the extension 25 to perform this operation. After the insertion of the extension 25, the portion 20 swings into position so that the projections 21 pass through the openings 22 and the tongue is then moved downwardly and locked into position.

Having thus described the construction of the parts which I use in connection with my invention, their operation may now be clearly understood: When it is desired to obtain free access of air through the upper part of the window frame, the screen 16 is moved to its upper-most position and is there retained by means of the springs 17—17. In order to form a tight connection so that it is not possible for insects to enter through the window, the upper window sash 11 is moved into its lower-most position, the upper portion of this sash thereby coming into close contact with the lower part of the window screen. The lower window sash 12 may be moved to any desired position in order to regulate the amount of air which will pass through the window opening.

When it is desired to remove the screen, it is first moved into its upper-most position as has been described, and the tongue portion 20 of the guide 15 is then raised until the projections 21 register with the openings 22. This tongue portion is then swung inwardly on its pivot 26, and then moved downwardly so that the extension 25 is removed from the tongue of the upper portion of the guide 15. The screen 16 may now be moved into its lower-most position and inasmuch as the entire lower portion of the tongue of the guide 15 has been removed, the screen can now be readily separated from the window frame by swinging the screen outwardly by means of the handle 27 until the right-hand edge of the screen as shown in Fig. 1 is clear of the window frame, after which the left-hand side of the screen may be removed from the left-hand guide 14.

It is apparent that many changes could be made in the detailed construction of the parts which I have described without departing from the spirit of my invention.

What I claim as new and desire to cover by United States Letters Patent is:

1. In a device of the class described, the combination with a window frame, of a screen vertically movable within said frame, hollow screen guides mounted on the sides of said frame, one of said guides having a removable hinged section and a stationary retaining member adapted to receive said removable section with locking engagement, substantially as described.

2. In a device of the class described, the combination with a window frame, of a screen vertically movable within said frame, said screen having a longitudinal groove in each side, a tongued screen guide mounted on each side of said frame, one of said screen guides comprising two sections, one of which is removable when the screen is moved to a predetermined position, said removable section having a hinged extension, and a permanent portion of screen guide adapted to receive said removable section, substantially as described.

3. In a device of the class described, the combination with a window frame, of a window screen vertically movable within said frame, said screen provided with a longitudinal groove on each side, and a hollow metallic tongued screen guide mounted on each side of said window frame and engaging the grooves in said screen, one of said screen guides having a tongue which is removable when the screen is moved to a predetermined position, said tongue having projections thereon which are adapted to engage corresponding openings in a retaining portion of the guide and thereby to form an interlocking connection with the same, substantially as described.

4. A screen guide comprising a retaining member having openings therein, and a removable tongue member having projections adapted to pass through the openings in said retaining member and to thereby form interlocking engagement with said retaining member, substantially as described.

5. A screen guide comprising a retaining member and a tongue member, one portion of said retaining member being provided with openings adapted to receive corresponding projections on a removable section of said tongue member thereby forming interlocking engagement between the removable section of the tongue member and the retaining member, said removable section having a hinged extension adapted to engage a tongue section which is permanently connected with said retaining member, substantially as described.

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Witnesses:

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