

WINDOW SCREEN.

APPLICATION FILED MAY 10, 1912.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 1.

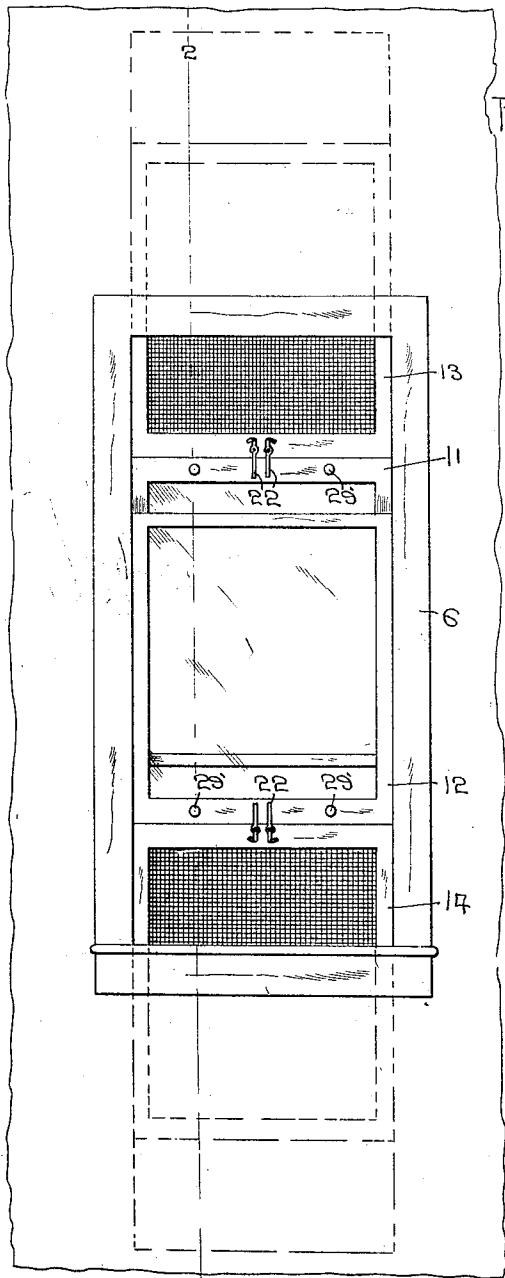
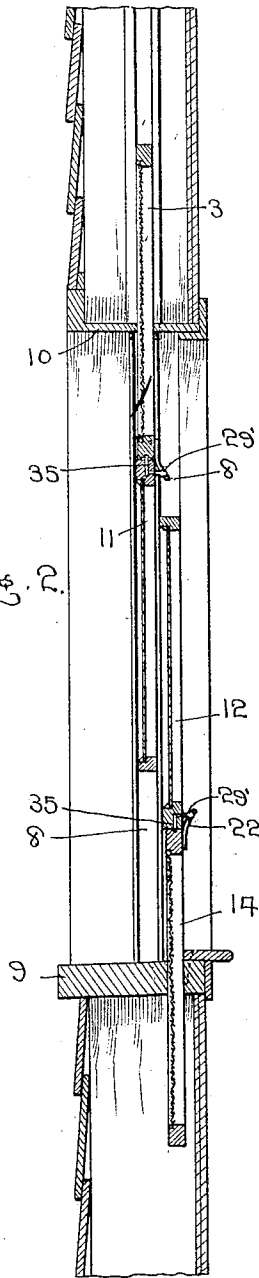

$$[T^* \tau \phi, \tau]$$


Fig. 2.

WITNESSES:

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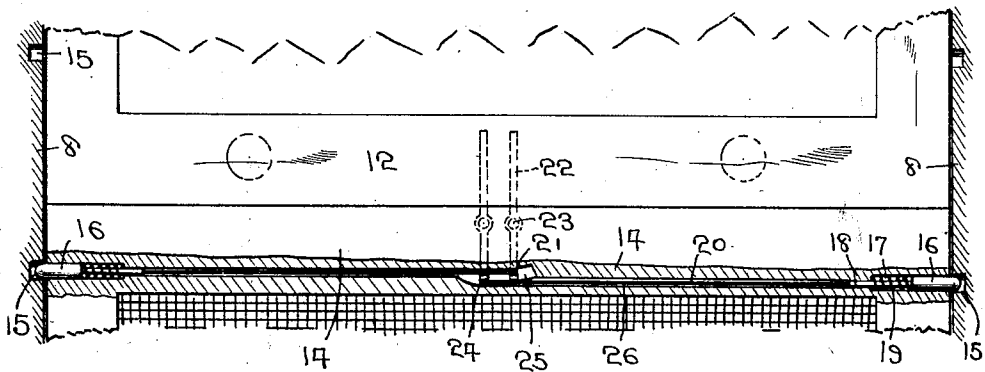
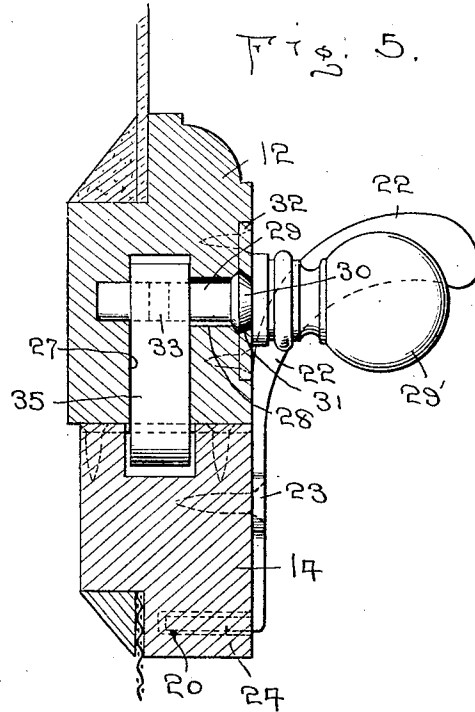
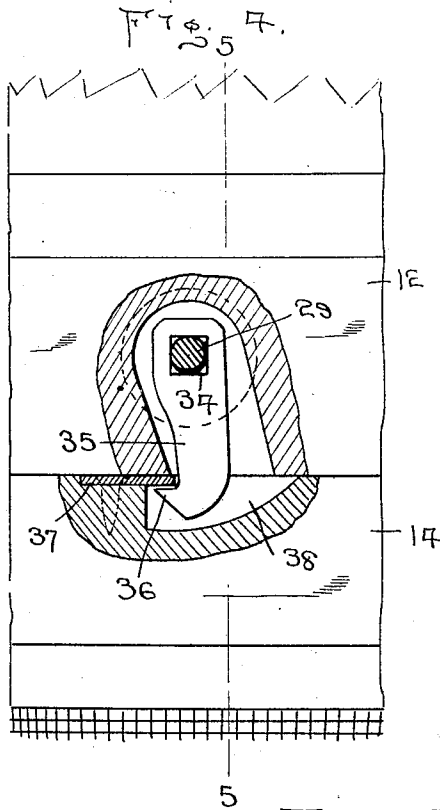
T. BAKER.
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1,042,380.



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UNITED STATES PATENT OFFICE.

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WINDOW-SCREEN.

1,042,380.

Specification of Letters Patent.

Patented Oct. 29, 1912.

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To all whom it may concern:

Be it known that I, THOMAS BAKER, a citizen of the United States, residing at Marysville, in the county of Snohomish and State of Washington, have invented certain new and useful Improvements in Window-Screens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to window screens.

An object of the invention is to provide new and improved fastening means for removably securing a window screen to a window sash.

Another object of the invention is to provide improved fastening means for removably securing a window screen to a window frame, and thereby, in connection with the aforesaid fastening means, to secure the window sash in fixed relation to the window frame.

Another object of the invention is to provide a window frame with upper and lower apertures, into which the window screens may be inserted, when the window sashes are in their normally closed position.

A further object of the invention is to practically render the window inaccessible, by a person on the outside thereof, whether the screens be in their visible or invisible position.

Other objects and advantages may be cited hereinafter and in the claims.

In the accompanying drawings, which form a part of this application, Figure 1 represents a fragmental section of a wall, having a window frame therein, my improved sashes and screens being applied thereto. Fig. 2 represents a vertical sectional view on the line 2—2 of Fig. 1. Fig. 3 represents a vertical sectional view through a fragmental portion of my improved window screen. Fig. 4 is a fragmental detail view of adjacent portions of the window sash and screen, having my improved fastening means applied thereto, and, Fig. 5 is a vertical sectional view taken on the line 5—5 of Fig. 4.

Referring to these drawings, in which similar reference characters correspond with similar parts throughout the several views; the window frame, as a whole, is represented by the numeral 6, and comprises the ver-

tical guides 8, the stile 9, and bridge 10. An upper sash 11 is slidably seated in the outer guide 8, the lower sash 12 being slidably seated in the inner guide 8.

While the application of my improved sash and screen mechanism does not preclude the use of the ordinary sash-cords and weights, or other ordinary means for balancing the sashes, these balancing means are not shown or described being no part of this invention.

The bridge 10 is apertured, directly above the outer guide 8, for receiving an upper screen-frame 13, the stile 9 being apertured directly under the inner guide 8 and under the lower sash 12, for receiving the lower screen-frame 14. The screen-frames 13 and 14 are preferably of the same thickness as the sashes 11 and 12, so that they may be drawn from the respective apertures in which they are seated, and may be caused to slide in the guides 8.

When the upper screen-frame is at its highest position, the bottom thereof registers with the bottom surface of the bridge 10, so that the outer sash 11 may be moved to the usual normal position; while the screen-frame 13 is entirely hidden from view. When the lower screen-frame 14 is in its lowest position, it is entirely hidden from view; while the inner sash 12 may rest with its lower edge in registration with the upper surface of the stile 9. It may be seen, therefore, that the window sashes may be raised and lowered, or allowed to remain in the usual closed positions, independently of the screen-frames 13 and 14, the latter being provided with means for securing them in their respective invisible positions as follows: The guides 8 are apertured at 15, for the reception of plungers 16, the latter being seated in plunger seats 17, in the upper and lower portions, respectively, of the lower and upper screen-frames. The plungers 16 are provided with a stem 18, around which a compression spring 19 is seated. Each spring 19 is compressed between the end of the plunger 16 and the end of the plunger seat 17, and tends continually to force the plunger outward. Each plunger stem is provided with an extension 20, which may be of wire or the like, pivotally connected at 21, with an actuating lever 22, the latter being pivoted at 23. The levers 22 are provided with lateral extensions 24, projecting

into slots 25, communicating with the aperture 26, which contains the rod or extension 20. The free ends of the actuating levers 22 are preferably curved outwardly from the surface of the screen-frame, so as to provide easy manipulation thereof; which manipulation consists in pressing the said free ends together, and thereby drawing the plungers 16 against the action of the springs 19, out of the apertures or keepers 15.

The lower sash 12 is provided with an aperture 27, extending upwardly, from its bottom surface and with a horizontal bore extending from its inner surface through the upwardly extending aperture 28. Into these apertures 27 and 28 is fitted a lock mechanism for securing said sash to the lower frame 14; this locking mechanism consisting of a shank 29, seated in the aperture 28, and being provided with a knob 29', by which it may be turned. The knob 29' is also provided with a frusto-conical boss 30 which has its bearing within the aperture 31 of the plate 32, said plate being secured to the sash 12, as clearly indicated. By means of this plate 32 the shank 29 is prevented from being moved longitudinally, but may be rotated, through the medium of the knob 29', the boss 30 being rotated within the aperture 31. The shank 29 is also provided with a rectangular section 33, fitted within a rectangular opening 34, through a hooked bolt or locking member 35, depending from the shank 29 and having its hooked end 36 in position for engaging a plate or keeper 37, secured to the upper surface or edge of the frame 14, said frame being apertured at 38, for receiving said hooked end. From an observation of the construction illustrated in Fig. 5, it will be seen that this locking mechanism may be properly fitted to window sashes of different thickness, the rectangular portion 33 being movable laterally within the hooked bolt 35 and therefore not being in position to interfere with the bearings in which the cylindrical and conical portions of the shank are seated. The outer sash is provided with a locking mechanism similar to that described for the inner sash; the only difference consisting in the reversal and inversion of the several elements thereof.

In practice, when it is desired to raise the lower sash independently of the screen, the knobs 29' are turned, for releasing the hooks 35 from the keepers 37, whereupon the sash may be raised, through the instrumentality of the knobs 29', independently of the screen 14; however, if it is desired to raise the screen with the sash, the actuating levers 22 may be grasped and pressed together, whereby the plungers 16 are released from the apertures 15, and the screen and sash may then be raised through the instrumentality of the levers 22, and locked in posi-

tion, by allowing the plungers 16 to engage with other apertures 15, above the lower ones. If it is desired to lower the outer sash, independently of the upper screen frame, the knobs 29' are employed, as described for the inner sash; but if it is desired to lower the upper screen together with the outer sash, the said screen and sash are allowed to remain in locked relation with each other, the levers 22 thereof being pressed together and pulled down, until the desired keepers 15 have been reached and engaged by the plungers 16, as described for the lower frame.

It will be seen that I have provided an improved combination of elements, which are fully capable of attaining the foregoing objects, and in a thoroughly practical and efficient manner.

I do not limit my invention to the exact details of construction, combination and arrangement of parts as herewith illustrated and described, but my invention may only be limited by a reasonable interpretation of the following claims.

I claim:

1. In combination, an apertured window frame having sash guides above the aperture thereof, a sash slidably seated in the guides, a screen-frame, slidably seated in the guides and adapted to be moved into the aperture of the frame, and means for locking the screen-frame into either of several alternative positions and thereby supporting the window sash.

2. In combination, an apertured window frame having sash guides in registration with the aperture thereof, window sashes slidably seated in the guides, window screens slidably seated in the guides and adapted to be moved upward into said aperture and locked in fixed relation to the window frame and means for removably securing the window sash to the screen so that said sash is supported in fixed relation to the window frame through the medium of the screen.

3. In combination, a window frame provided with sash guides and with an aperture under certain of the sash guides and with an aperture over other of the sash guides, sashes slidable in the guides, screen frames adapted to be slid into and out of the sash guides and apertures respectively, means for locking the screen-frames within said apertures, and means for locking the sashes to the respective screen-frames, and thereby effectually rendering the window inaccessible from the outside.

4. In combination, a window frame provided with sash guides and with upper and lower apertures respectively, sashes slidably seated in the guides, screen frames slidably seated in the guides and adapted to be slid into and out of the apertures respectively, means for locking the screens in open po-

sition, and means for locking the sashes to the screens, and thereby rendering the window inaccessible from without.

5 In combination, a window frame provided with sash guides, a sash slidably seated in the guides, a screen-frame slidably seated in the guides and adapted to be locked to the sash by means of a hooked bolt inserted in registering apertures in the sash and frame respectively, said hooked bolt 10 having a rectangular aperture therethrough, a shank having a rectangular section slidably and non-rotatably seated in the bolt, means whereby the shank may be rotated, 15 and means for securing the shank in fixed relation to the bolt, said rectangular aperture through the bolt extending beyond the vertical edges of the rectangular portion of the shank, whereby the bolt and shank may 20 be fitted to window sashes of different thicknesses without danger of the rectangular

portion of the shank interfering with the bearings of said shank.

6. In combination, a window frame having apertured guides therein, a screen-frame 25 slidably seated in the guides, horizontally slidable plungers carried by the frame and adapted to enter the apertures of the window frame, actuating levers pivotally and adjacently secured to the frame, and means 30 connecting the actuating levers with the plungers, whereby the latter may be withdrawn from the apertures of the window frame through the instrumentality of said actuating levers. 35

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS BAKER.

Witnesses:

T. G. MERRICK,
EDWARD MURPHY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."