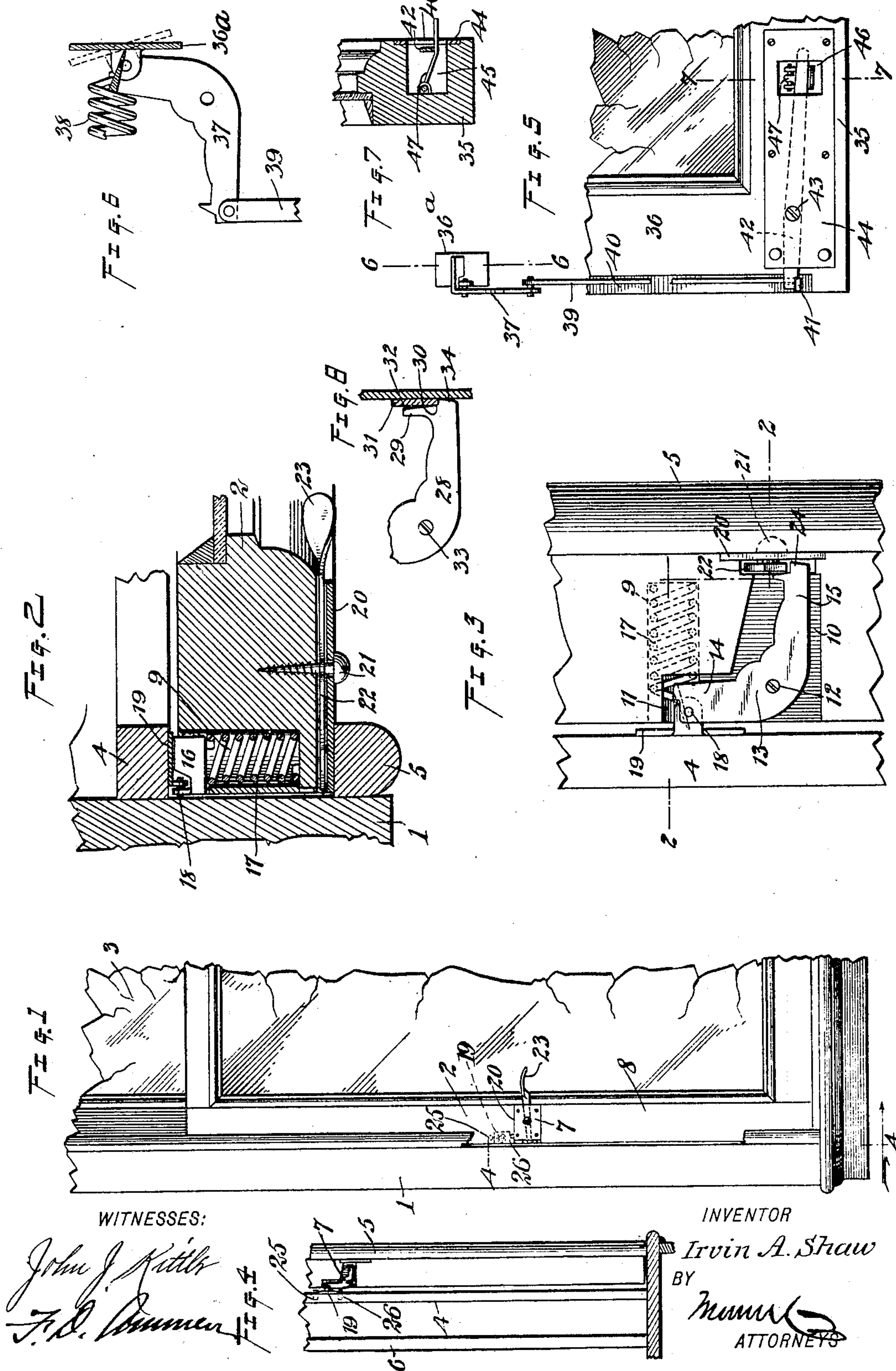


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I. A. SHAW.
SASH FASTENER.

APPLICATION FILED SEPT. 14, 1905.



UNITED STATES PATENT OFFICE.

IRVIN A. SHAW, OF LEAVENWORTH, KANSAS.

SASH-FASTENER.

No. 825,768.

Specification of Letters Patent.

Patented July 10, 1906.

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To all whom it may concern:

Be it known that I, IRVIN A. SHAW, a citizen of the United States, and a resident of Leavenworth, in the county of Leavenworth and State of Kansas, have invented a new and Improved Sash-Fastener, of which the following is a full, clear, and exact description.

This invention relates to sash-fasteners.

It is especially adapted for use in connection with sashes which open by sliding vertically in guide-strips.

The object of the invention is to produce a fastener of this class which is simple in construction and which will operate to maintain a sash in any position desired.

A further object is to construct and arrange the fastener so that it will operate to maintain a window-sash firmly against its guide-strips. In connection with the fastener means are provided that cooperate with the fastener for locking the sash in a closed position and so that it may not be opened from the outside.

The invention consists in the construction and combination of parts, to be more fully described hereinafter and definitely set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of a portion of one side of a window-casement having sashes provided with my invention, the sashes being represented as broken away, together with a portion of the window-casement, to facilitate the disclosure of my invention. Fig. 2 is a horizontal section taken on the line 2 2 of Fig. 3 and passing through the sash and adjacent part of the casement at the point where the fastener is applied. Fig. 3 is an edge or side elevation of the sash and representing the fastener applied thereto, this view also including a portion of the guiding-bead with which the fastener cooperates. Fig. 4 represents the lower portion of the window-casement, partially in section and broken away, and represents the lower sash provided with my fastener, the sash being shown in its closed position, a portion of the sash being broken away to illustrate the means referred to above for locking the sash in a closed position, the view being taken

substantially on the line 4 4 of Fig. 1. Fig. 5 is a front elevation showing the lower portion of the sash at one side and representing a modified manner of applying my fastener thereto. A portion of the fastener in this view is represented as broken away. Fig. 6 is a section taken on the line 6 6 of Fig. 5 and upon an enlarged scale, showing details of the construction. Fig. 7 is a section on the line 7 7 of Fig. 5, and Fig. 8 is an elevation showing a modified construction of certain parts which enable the fastener to lock itself in an open position.

Referring more particularly to the parts, 1 represents a window-casement, the same being provided with a lower sash 2 and an upper sash 3, the said sashes being arranged to slide vertically to open or close in a well-known manner. The lower sash 2 is guided between the parting-strip 4 and an inside bead 5, while the upper sash 3 is guided between the parting-strip and an outer bead 6.

In applying my invention I provide a fastening device 7, preferably applied, as shown in Fig. 1, at substantially the middle point of the stile 8 of the sash. The construction of this device is shown most clearly in Figs. 2 and 3. In order to apply the device to the sash, I provide the inner face of the sash adjacent to the parting-strip 4 with a horizontal bore 9. In the edge face of the stile 8 I provide a recess 10, as illustrated in Fig. 3, which recess is preferably formed with an upwardly-disposed pocket 11, which communicates with the aforesaid bore 9. In the recess 10 I mount pivotally at the point 12 a bell-crank lever 13, the same having a vertical arm 14 and a horizontal arm 15. The arm 14 projects up into the pocket 11, at which point it is bent laterally, so as to form a horizontal finger 16, which projects substantially centrally across the diameter of the bore 9, as illustrated most clearly in Fig. 2. Within the bore 9 I provide a helical spring 17, the outer end of which rests against the edge of the finger 16 and tends to press the same toward the parting-strip 4. Pivotaly attached to the arm 14 at the point 18 I provide a shoe 19, which consists of a flat plate having an ear integral therewith at the pivotal connection 18, and the spring 17 normally operates to maintain the shoe against the face of the parting-strip, as illustrated most clearly in Figs. 2 and 3.

I provide means for depressing the arm 15 of the bell-crank lever, so as to relieve the parting-strip from the pressure of this shoe. For this purpose I provide on the inner face of the stile 8 a face-plate 20, to the inner side of which there is pivotally attached at 21 a finger-lever 22. The outer extremity of this finger-lever 22 is bent over so as to form a thumb-plate 23, which facilitates the application of manual pressure to the lever, as will be readily understood. The extremity of the arm 15 is provided with a horizontal shoulder 24, and upon this shoulder the inner extremity of the lever 22 normally rests. From this arrangement evidently if the thumb-plate 23 is forced upwardly the inner extremity of the finger-lever 22 will be depressed, carrying with it the arm 15 and rocking the bell-crank lever 13 upon its pivot 12. In this way the arm 14 is moved away from the parting-strip 4, compressing the spring 17 and withdrawing the shoe 19 from the parting-strip. When the sash is relieved of the pressure exerted by the shoe 19, it may be readily raised or lowered, as desired. When the finger-lever 22 is released, the spring 17 of course returns the shoe 19 to the parting-strip, and the force exerted is sufficient to maintain the sash in an elevated position.

In practice I prefer to apply two of the devices 7 in connection with each sash, one being disposed on each side in the position shown in Fig. 1, as will be readily understood. With the arrangement shown for the lower sash the devices 7 operate to maintain the sash against the inside beads 5. With the upper sash the shoes will of course rest against the outer beads 6, operating to force the sash inwardly against the parting-strip 4, as will be readily understood.

I provide means for locking the lower sash in its closed position. For this purpose I provide the parting-strip 4 with projecting pins 25 26, disposed apart sufficiently to receive the shoe 19 therebetween. When the shoe is retracted, it can pass over the upper pin 25, so as to seat against the parting-strip between the pins. In this way the sash may be locked against being raised from the outside.

Where this device 7 is applied to a window which is at an elevated position and which must be controlled by means of a window-pole, I provide an arrangement for locking the fastener in an open or retracted relation. This arrangement is clearly illustrated in Fig. 8. It consists in providing the horizontal arm 28 of the bell-crank lever with an upwardly-projecting toe 29, which lies adjacent to the shoulder 30, upon which the inner extremity of the finger-lever 31 rests. The outer edge 32 of the toe 29 inclines away from the pivot-point 33 of the lever in an upward direction, so that when the arm 28 is

depressed the lever 31 is forced against a face-plate 34 in such a manner as to jam the lever thereagainst. In this way the lever is locked, and the shoe operated thereby will be maintained in a retracted position.

I provide an arrangement for operating the fastener from the lower rail 35 of the sash 36, as illustrated in Figs. 5 to 7, inclusive. When adopting this arrangement, I provide a shoe 36^a, which is pivotally attached to a bell-crank lever 37, the said bell-crank lever being applied to the stile of the sash in the same manner as the bell-crank lever 13, fully described above. The construction of this bell-crank lever is also the same as that of the bell-crank lever 13, and the shoe 36^a is normally maintained against the parting-strip by means of a spring 38, which is applied similarly to the spring 17. Instead of operating the bell-crank lever directly by a finger-lever I provide a vertically-disposed link 39, which is mounted in a longitudinally-disposed groove 40, formed in the edge of the sash 36, as indicated in Fig. 5. The lower extremity of this link 39 is turned upwardly to form a toe 41. This toe 41 is engaged by a main lever 42, which is attached pivotally at 43 to the inner face of a face-plate 44, which face-plate is attached to the outer face of the rail 35, as shown. In order to receive this lever 42, the rail is preferably provided with a horizontal groove or recess 45. Near the extremity of this recess, remote from the link 39, the face-plate 44 is provided with an opening 46. On the wall of the recess opposite this opening a finger-lever 47 is pivotally attached, and this lever extends under the adjacent extremity of the lever 42 and projects through the opening 46 beyond the outer face of the rail, as indicated most clearly in Fig. 7. From this arrangement evidently by forcing the finger-lever 47 upwardly the lever 42 will be actuated so as to draw the link 39 downwardly, in this way depressing the horizontal arm of the bell-crank lever 37 and withdrawing the shoe from the parting-strip, as will be readily understood. The arrangement just described will be the one usually adopted for the windows of cottages and residences. In this case, as in the form first described, there will be two of the devices in connection with each sash, and these will be applied on each side in the same manner as before.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In combination, a window-casement having guide-strips, a sash adapted to slide between said guide-strips and having a recess therein, a spring received in said recess, a lever attached to the edge of said sash and having a laterally-bent finger projecting across said recess and engaging said spring, a shoe pivotally attached to said lever adjacent to

said finger and adapted to engage the adjacent guide-strip, a second lever attached to the outer face of said sash, and a connection between said second lever and said first lever.

- 5 2. In a sash-fastener, in combination, a spring-pressed shoe, a lever controlling the same, and a pivoted member intermediate of said shoe and said lever having an inclined edge engaging said lever, said pivoted mem-

ber affording means for wedging said lever to when depressed.

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

IRVIN A. SHAW.

Witnesses:

E. B. BAKER,
LUCIEN BAKER.