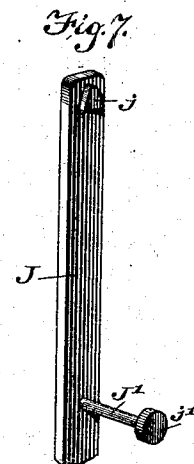
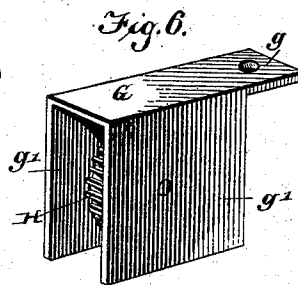
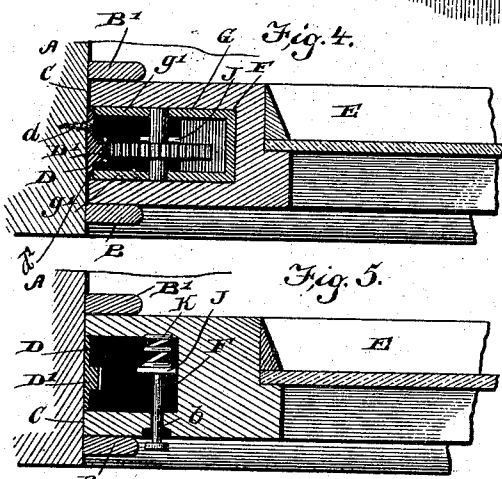
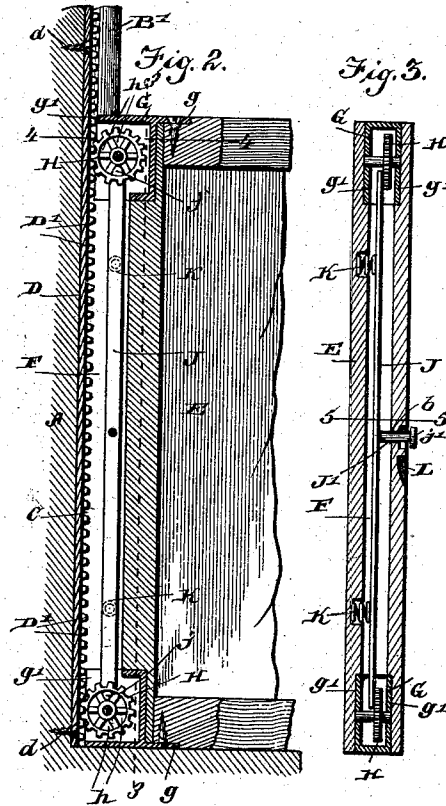
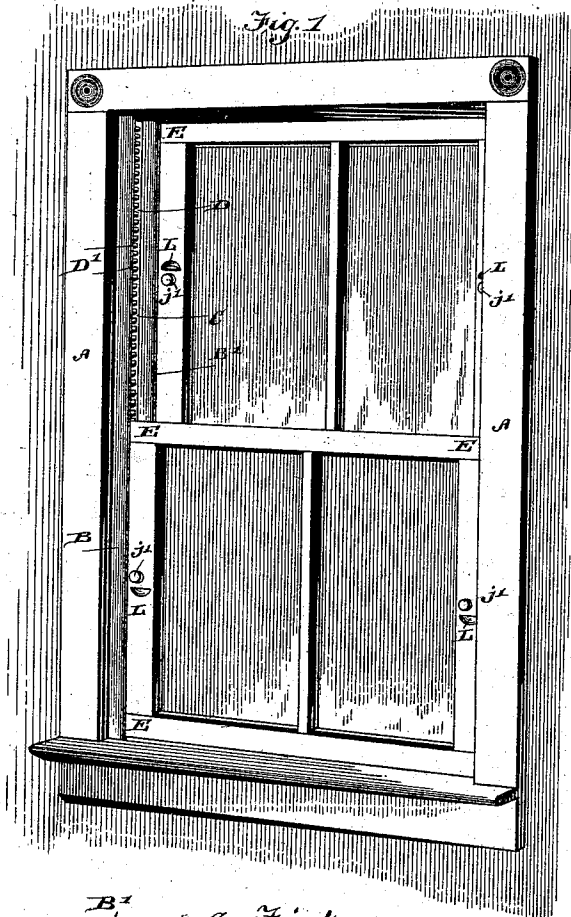


(No Model.)

H. A. BOOK.
SASH FASTENER.

No. 557,953.

Patented Apr. 7, 1896.



WITNESSES:
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UNITED STATES PATENT OFFICE.

HELENA A. BOOK, OF WATERBURY, CONNECTICUT.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 557,953, dated April 7, 1896.

Application filed January 10, 1896. Serial No. 575,010. (No model.)

To all whom it may concern:

Be it known that I, HELENA A. BOOK, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a new and Improved Sash Holder and Lock, of which the following is a specification.

My invention is in the nature of a combined sash holding and locking mechanism; and it primarily has for its object to provide a mechanism of this character of a simple and inexpensive construction, which will serve to hold the sash up and locked at any point to which it may be desired to raise and lower the same.

My invention also has for its object to provide a sash lock and holder in which the raising or lowering of the sash and the manipulation of the releasing devices for the said lock and holder are effected by the same operation and in which the said releasing devices are so arranged that they cannot be operated from outside of the sash when lowered or but partially raised without breaking the glass.

With other objects in view, which will hereinafter be referred to, my invention consists in the peculiar combination and novel arrangement of parts such as will be first described in detail, and then be specifically pointed out in the appended claim, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a window equipped with my improvements. Fig. 2 is a vertical section of a portion of a window-frame and a sash constructed in accordance with my invention. Fig. 3 is a section taken on the line 3 3 of Fig. 2. Fig. 4 is a horizontal section taken on the line 4 4 of Fig. 2. Fig. 5 is a similar view taken on the line 5 5 of Fig. 3. Figs. 6 and 7 are detail views of the parts detached.

In its practical construction my invention comprises a rack-and-pinion mechanism and suitably arranged and easily manipulated locking devices which engage the pinions and normally hold them from revolving.

Referring now to the drawings, in which like letters indicate similar parts in all the figures, A indicates the window-casing, which has the usual sash-guides or head members B B', between which the sashes are adapted to slide. As both the upper and lower sashes are equipped with like rack-and-pinion devices,

a description of such devices for one sash will suffice for both.

In the sashway C is secured by screws *d d* a plate D, having a central projecting rack portion D', which extends the full height of the window-casing, as most clearly shown in Fig. 1.

By referring now more particularly to Figs. 4 and 5, it will be observed that the ends of the sash E have vertical recesses F F, in the upper and lower ends of which are fitted metal housings G G, one of which is shown in detail in Fig. 6, and such housings have each an apertured extension *g*, whereby they can be screwed fast to the upper or lower edges of the sash.

It will be noticed that the edges *g' g'* of the housing do not extend out flush with the outer edge of the sash, and the said outer edge of the sash laps or fits over the edges of the plate D, is guided thereby, and makes a close joint. The edges *g'* of the housing bear against the face portions *d'* of the plate and also serve to guide the sash.

Within each housing G is journaled a pinion H, which is adapted to engage the rack portion D' of the plate D, and such pinions have one or more non-circular openings or seats *h* for a purpose presently explained.

So far as described it will be readily seen that the sash is guided on and has a close joint connection with the rack and plate D' D, and thereby admits of an easy movement thereof up or down.

To hold the sash locked at any point between its highest or lowest movement, I provide in each end of the sash a detent, which is in the nature of a stout sheet plate J, which extends from the upper to the lower pinion, as most clearly shown in Fig. 3. By reference to the said Fig. 3 it will be seen that the plate J is held with its ends extended over the rear faces of the pinions H, and has at the upper and lower end a non-circular lug member J', which lugs are adapted to be normally moved into engagement with the non-circular seats or openings *h* in the said pinions H and hold them from revolving. Thus it will be manifest that no matter at which point the sash may be as the lugs *j* normally engage the pinions H the sash will be held locked from movement up or down.

To hold the sash-plates J in engagement with the pinions H, springs K K are held against the under faces, as most clearly shown in Fig. 3.

5 As a convenient means for moving the plates H out of a locked engagement with the pinions at the same time the sash is to be raised or lowered, I provide the sash at each side with thumb or finger depressions L L, and the plates
10 J with the outwardly-extended members J' J', which pass through apertures b in the sash at a point just above the depressions L, such members having heads j', as most clearly shown in Fig. 5. By this arrangement of parts
15 it will be manifestly clear that by placing the thumbs in the seats L and pressing against the members J' J' with the fingers, the plates H will be moved back out of engagement with the pinions and thereby allow the sash to
20 raise or lower as may be desired, it being also understood that by removing the pressure on the said members J' J' the plates H will again move to a locked engagement with the pinions and hold them from further rotation.

25 While I have shown my improvements as applied to each edge of the window-sash, as

such construction is a preferred one, they need be applied only on one side if the sash is a small or light one.

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

In a sash holder and lock substantially as described, the combination with the plate D, having a projected rack portion D', of the
35 sash E, having a vertical recess of a width equal that of the plate D, whereby to lap the edges of said plate, pinions held to rotate in the upper and lower ends of the said recess f, and to engage rack portion D', the plates
40 J, held in the recess f, having a lug member j, at each end adapted to engage the recesses, the seats in the pinions, the spring device for normally holding the said plate in engagement with the said pinions such plate having
45 an outwardly-extended member j', passing through the sash substantially as shown and for the purposes described.

HELENA A. BOOK.

Witnesses:

JOHN P. KELLOGG,
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