(No Model.)

# W. H. FYE.

## SASH LIFT.

No. 418,173. Patented Dec. 31, 1889.

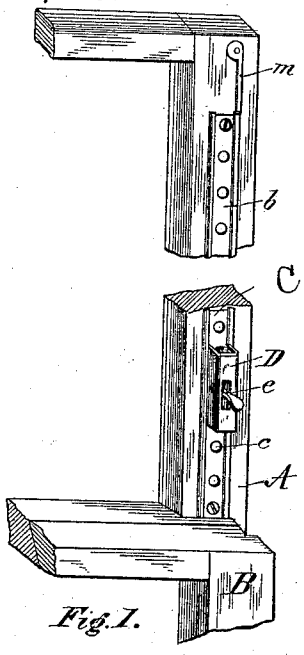



Fig. 1.

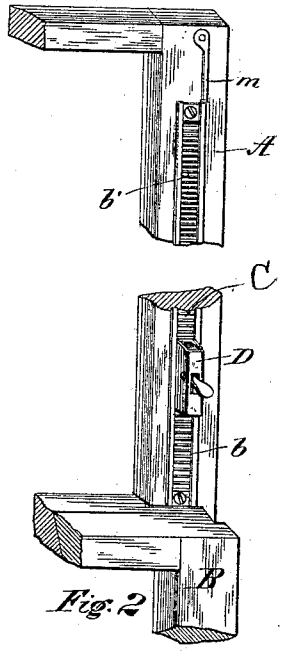



Fig. 2.

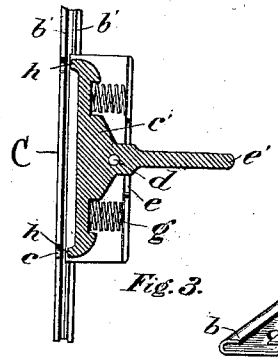



Fig. 3.

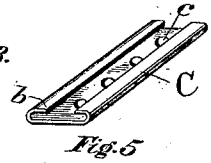



Fig. 5.

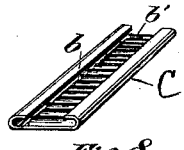



Fig. 8.

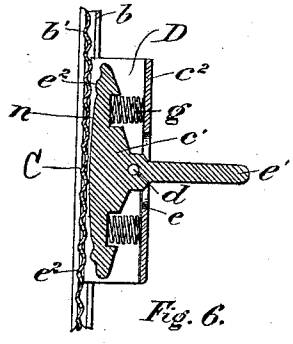



Fig. 6.

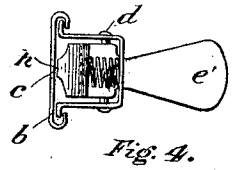



Fig. 4.

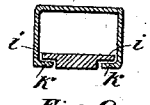



Fig. 9.

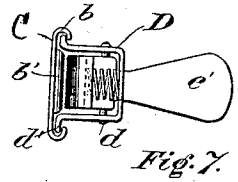



Fig. 7.

Witnesses
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# UNITED STATES PATENT OFFICE.

WILLIAM H. FYE, OF CHICAGO, ILLINOIS.

## SASH-LIFT.

SPECIFICATION forming part of Letters Patent No. 418,173, dated December 31, 1889.

Application filed April 18, 1889. Serial No. 306,478. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. FYE, 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-Sash Lifts, of which the following is a specification.

My invention relates to certain new and useful improvements in window-sash lifts; and it consists in certain peculiarities of the construction and arrangement of the same, as will be hereinafter more fully set forth and claimed.

The objects of my invention are to afford facilities for lowering and raising the upper sash of a window without the necessity of moving or interfering with the lower one, and also to permit the lower sash to be raised or lowered without obstruction. I attain these objects by the mechanism, arrangement, and application of my device; and in order to enable others skilled in the art to which my invention pertains to make and use the same I will now proceed to describe the same, referring to the accompanying drawings, in which—

Figures 1 and 2 are perspective views of the upper and lower sashes of a window with my device applied. Fig. 3 is a longitudinal section through the center of the guideway or track and the movable catch or locking device. Figs. 4 and 7 are end views of the same, showing modifications. Figs. 5 and 8 are perspective views showing modifications of the guideway or track. Fig. 6 is a modification of Fig. 3. Fig. 9 is an end view of the track and catch, showing another modification.

Similar letters refer to corresponding parts throughout the different views.

A represents a portion of the upper sash with my attachment secured thereto.

B is a portion of the lower sash.

C is a guideway or track formed of one piece of material, and preferably of metal, and is provided or formed at either side with inwardly-projecting lips *b*, as seen in Figs. 5 and 8.

On the inner surface and between the lips *b* of the track C, I form indentations, stops, or corrugations *b' c*, for engagement with the teeth or projections of the catch or locking device, as will presently be explained.

In Figs. 1 and 5 I have shown the track provided with holes *c*, arranged at suitable distances apart, and in Figs. 2 and 8 the track with transverse corrugations or indentations *b'*, and while I prefer the latter I may employ the other form and obtain the same results.

D is a sliding or movable catch, and is formed of two pieces *c'* and $c^2$, which are loosely secured together by a suitable rivet or pin *d*. The piece $c^2$ forms a casing or box for the part *c'*, as is seen, and is preferably made of one piece of sheet metal shaped to any desired form, but preferably of rectangular form, as shown, and having its lower edges bent outward, forming flanges *d'*, which flanges extend under and engage with lips *b*, thus holding the piece $c^2$ in position and allowing it to slide freely up or down the track, as is readily understood. On the top of this casing is provided a longitudinal slot *e*, through which the handle *e'* of the catch extends. The lower portion of the catch *c'* is formed of suitable length and size to fit loosely in the casing $c^2$, and has its surface adjacent to the track slightly curved or of "rocker" form, and is provided near each end with teeth $e^2$, which, when it is desired, engage with the indentations or corrugations *b'*, all of which will be seen and understood by reference to Fig. 6. The opposite surface is formed with suitable notches *f* or depressions for the reception of the springs *g*. I prefer to form the catch *c'* slightly curved on its lower surface *n*, and with teeth near the ends thereof, for the reason that when it is desired to raise the lower sash the smooth curved surface will be held near the track by the springs *g*, and will clear the indentations, and the handle will thus be kept at a right angle with the sash, offering no friction or obstruction to the upward or downward movement of the lower sash.

It will be understood and seen that one of the main features of my invention is, that the catch or locking device D, when not in engagement, will rest upon the meeting-rail of the lower sash, and will travel up or down the track with the movement of the same, offering no impediment or obstruction whatever, and that

it (the catch) is ever in place to engage with the track when it is desired to lower or raise the upper sash; and this is done by simply pressing the handle $e'$ up or down, when the teeth will mesh with the indentations and the sash be easily moved.

In Figs. 3, 4, and 5 I have shown a modification of my device which I may use, and in this form the parts are constructed as above, with the exception that at each end of the piece $c'$, I provide projections $h$ to engage with holes $c$. In this construction the springs $g$ hold the handle $e'$ at a right angle to the sash until it is desired to move the sash, when the handle is pressed up or down, as before, and the sash thereby raised or lowered.

Fig. 9 illustrates another form of my device which I may use without departing from the spirit of my invention. In this modification the guideway or track is provided with either holes or indentations or corrugations on its face, as may be desired, and has formed on either side a flange $i$, with which the inwardly-turned flanges $k$ on the catch engage, and permits of the free sliding movement of the catch.

In the drawings I have shown a spiral spring; but of course I may use other kinds, if I so desire.

It is also evident that I may embed the track in the sash, or may secure it, as shown, to the face thereof. At the top of the upper sash I may place a fastening or button $m$, of any suitable form, to rest upon the top of the track to prevent the catch from falling out; or I may dispense with its use when it is desired to have one sash pass the other or to remove the catch from the track.

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

1. In a window-sash lift, the combination of an upper sash provided with a guideway or track having stops, a sliding, movable, or traveling catch having teeth or projections to engage with said stops, and a lower sash, substantially as shown and described, and for the purpose set forth.

2. In a window-sash lift, the catch D, having casing $c^2$, slot $e$, flanges $d'$, pivot $d$, and the piece $c'$, provided with teeth $e^2$, notches $f$, springs $g$, and handle $e'$, all arranged and operating substantially as shown and described, and for the purpose set forth.

3. In a window-sash lift, the catch D, having casing $c^2$, slot $e$, flanges $d'$, pivot $d$, and the piece $c'$, provided with teeth $e^2$, notches $f$, springs $g$, and handle $e'$, in combination with a sash provided with a guideway or track C, having lips $b$ and transverse stops $b'$, substantially as shown and described, and for the purpose set forth.

In witness whereof I have hereunto set my hand and affixed my seal this 21st day of March, 1889.

WILLIAM H. FYE. [L. S.]

In presence of—
HENRY C. HANSEN,
CHAS. C. TILLMAN.