(No Model.)

C. W. ELLIOTT.

AUTOMATIC SASH LIFTER AND LOCK.

No. 278,323. Patented May 29, 1883.

Fig. 1.

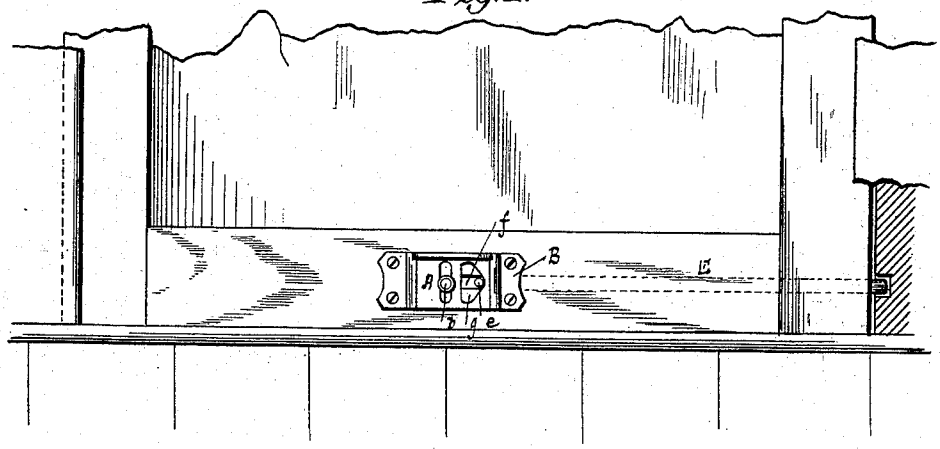


Fig. 2.

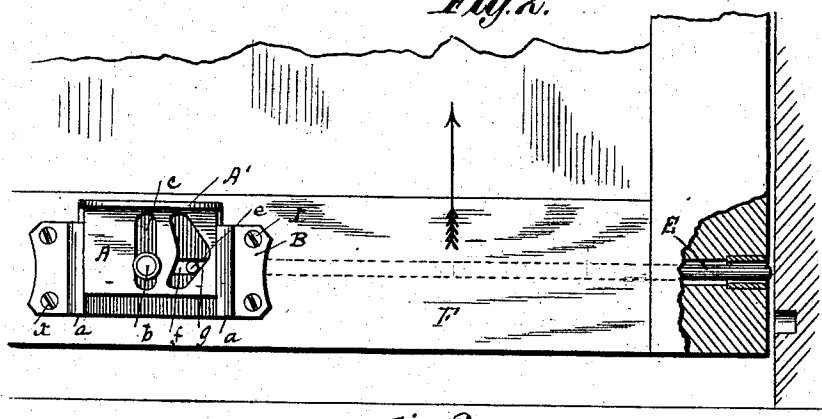


Fig. 3.

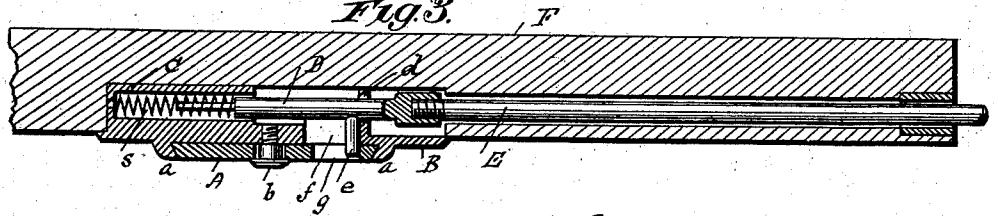
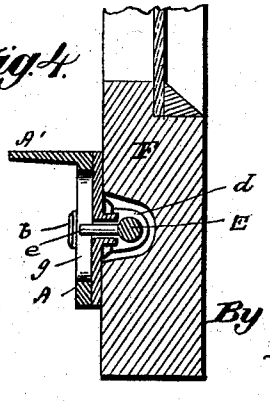


Fig. 4.



Witnesses.
Robert Emett.
J. Walter Blandford

Inventor
Chas. W. Elliott
By Marcellus Bailey
his Atty.

UNITED STATES PATENT OFFICE.

CHARLES W. ELLIOTT, OF BOSTON, MASS., ASSIGNOR TO HIMSELF, HORATIO N. RUGGLES, AND MATTHIAS DONNELLY, OF SAME PLACE.

AUTOMATIC SASH LIFTER AND LOCK.

SPECIFICATION forming part of Letters Patent No. 278,323, dated May 29, 1883.

Application filed January 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. ELLIOTT, of Boston, in the State of Massachusetts, have invented certain new and useful Improvements in Sash Lifters and Fasteners, of which the following is a specification.

My invention relates to that class of combined sash lifting and fastening devices in which the lifter is movable up and down upon the sash within prescribed limits, and operates, when used either to raise or depress the sash, to automatically draw the bolt by which the sash is locked in place; and it consists in an improved arrangement and combination of devices for the purpose, which may be generally stated to consist in combining with the vertically-movable lifter-handle the horizontally spring-controlled locking-bolt, by means of a connection consisting of a V-groove on the one and a pin on the other to engage and traverse said groove, whereby the traversing movement of the pin (caused by raising or pressing down the lifter) in either direction from the apex or elbow of the groove shall cause the bolt to be drawn and the sash unlocked.

The mechanism in which the improvement is embodied is simple, effective, cheap, and readily made and applied.

In the accompanying drawings, Figure 1 is a front elevation of the fastener and lifter in place on a sash. Fig. 2 is a like view, partly in section, with the parts in the position they occupy when the bolt is drawn. Fig. 3 is a longitudinal horizontal section, and Fig. 4 is a transverse vertical section, of the device, together with the sash-rail to which it is attached.

A is the lifter, consisting of a plate mounted so as to slide up and down between gibs or dovetailed guides *a* on a base-plate or scutcheon, B. A pin, *b*, projecting from B into a vertical slot, *c*, in the lifter, limits the extent of movement of the latter. The lifter-plate is provided with a horizontal projection, A′, constituting the handle by which it can be raised or depressed.

Upon the rear of base B is a horizontal cylindrical case, C, closed at its outer end and intended to receive the rear end of the bolt-socket D, which is supported in the case C and a guide, *d*, so that it can slide back and forth.

A spiral spring, S, within the case C, encircling the stem of the bolt-socket, and confined between a flange or pin on that stem and the outer closed end of the case, serves to push the bolt-socket forward in a direction which shall cause the bolt to protrude from the sash.

The bolt, as shown at E, is a cylindrical rod or stem provided with a screw-threaded end which screws into the internally-screw-threaded end of the socket D. The parts D and E, when in use, are virtually one, and the object of making them separable is to facilitate the fitting of the device to the sash. From the stem of the bolt or bolt-socket projects forward a pin or stud, *e*, which passes through a horizontal slot, *f*, in the base-plate, and enters and engages V-slot *g* in the lifter-plate.

The normal postion of the pin is at the elbow or angle of the slot *g*, to which position it is brought by the stress of the spring S, the plate A adapting itself to this position, in which the bolt will be pressed forward and protruded from the side of the sash. It will be seen that if the lifter A be moved from this position in one direction or the other, one or the other of the inclined faces of the groove against which the pin works will act to gradually force back the pin, and to thus draw back the bolt.

To apply the device to the sash F, the base-plate B and parts carried by it, with the exception of the bolt E, are applied to the lower rail of the sash, in the face of which a mortise or recess is cut of a size sufficient to receive the parts carried on the back of the base-plate, and to allow them requisite freedom of movement. The base is secured to the sash by screws *x*, or other suitable means. Through a hole bored from one side of the sash into the recess or mortise cut in the sash-front for receiving the bolt-socket the bolt E is inserted, and is fitted and screwed into the socket D, after which the device is ready for use, it being of course understood that any suitable number of holes, *y*, to receive the projecting end of the bolt are provided in the portion of the contiguous frame G in which the sash slides. Under these circumstances it will be seen that so long as the lifter is untouched the

bolt will remain protruded, and will thus lock the sash to the frame. So soon, however, as it is attempted to raise or lower the sash by means of the lifter, the first effect will be to move the lifter in one direction or the other independently of the sash, with the result of moving the pin back from the elbow of the groove *g* along one or the other of the rearwardly-slanting faces of the groove, and consequently of drawing the bolt, after which the sash can be freely moved. The moment pressure is removed from the lifter, the bolt will, by the stress of its now released spring, seek and find the hole *y* which may be opposite to it, and the sash will again be locked in place.

I remark that the bolt-work may carry the V-groove, and the lifter-plate the pin to work in said groove. This, however, would be an obvious reversal of the arrangement shown, and would not be so convenient.

What I claim, and desire to secure by Letters Patent, is—

1. The sliding sash-lifter, in combination with the longitudinally-reciprocating spring-controlled sash-bolt, provided the one with a V-groove and the other with a pin which engages said groove and is normally held by the stress of the spring at the apex or elbow of said groove under the arrangement and for joint operation as hereinbefore set forth.

2. The base-plate and the sliding lifter, the spring-receiving case, the spring, and the bolt-socket mounted on said base-plate, as described, in combination with the bolt detachably connected with said socket, and a pin in the bolt-stem, which enters and engages a V-groove in the sliding lifter, these parts being constructed and arranged for joint operation as hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 16th day of January, 1883.

CHAS. W. ELLIOTT.

Witnesses:
C. A. SHAW,
J. G. SHAW.