F. CASPAR.
Sash-Fasteners.

No. 196,630 Patented Oct. 30, 1877.

Fig. 1.

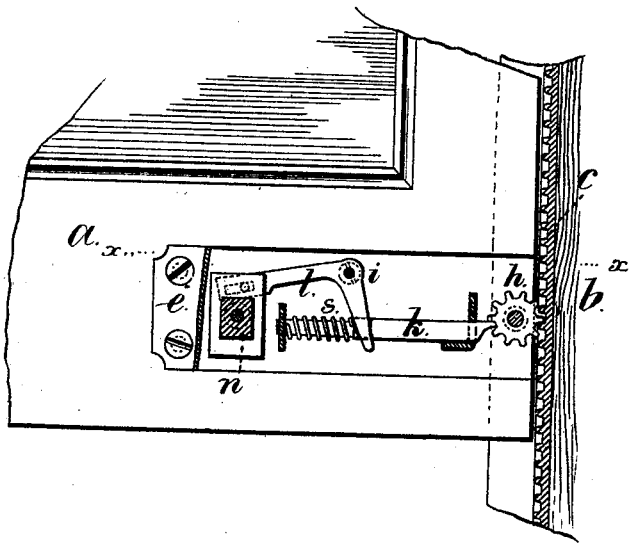
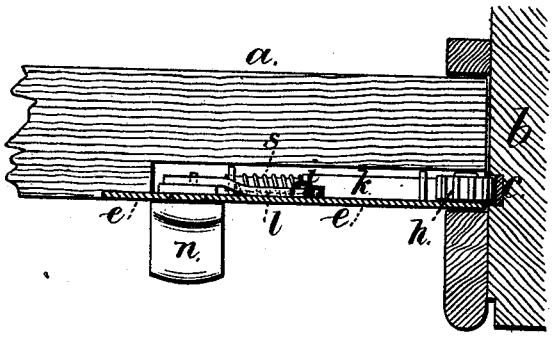


Fig. 2.



Witnesses

Chas. F. Smith
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Inventor

Frederick Caspar.

per Samuel W. Ferrell.
Atty

UNITED STATES PATENT OFFICE.

FREDERICK CASPAR, OF PLAINFIELD, NEW JERSEY.

IMPROVEMENT IN SASH-FASTENERS.

Specification forming part of Letters Patent No. **196,630**, dated October 30, 1877; application filed June 27, 1877.

To all whom it may concern:

Be it known that I, FREDERICK CASPAR, of Plainfield, in the county of Union and State of New Jersey, have invented an Improvement in Sash-Supporters for Car-Windows, &c., of which the following is a specification:

I make use of a toothed rake, into which a pinion is geared, the two running together as the sash is moved up and down, and there is a sliding bolt operated by a bent lever and thumb-piece, whereby the pinion is locked or liberated, so as to allow the sash to be moved or to be held in any position at which it may be placed, all as hereinafter more fully described and claimed.

In the drawing, Figure 1 is an elevation of a portion of the sash, with the sash-supporter in section; and Fig. 2 is a sectional plan at the line *x x*.

The sash *a* and frame *b* are of any usual character, and *c* is the toothed rack recessed into the window-frame. The plate *e* is attached to the lower rail of the sash, and at the back of the plate is the pinion *h*, upon a stud or gudgeon on the plate *e*, said pinion having teeth that gear into the teeth of the rack *c*.

The sliding bolt or latch *k* is made with an end adapted to pass in between the teeth of the pinion and hold the same firmly, and this bolt *k* is sustained in loops at the back of the plate *e*.

The bent or bell-crank lever *l* has its fulcrum at *i*, and one end passes into a slot in the bolt *k*, and the other end is connected by a pin and slot with the vertical sliding thumb-piece *n*, that passes through a mortise in the plate *e*, and this thumb-piece, by its weight, serves to project the latch into the teeth of the pinion; but a spring, *s*, may be added, to render the movement of the latch more rapid. There may be a stationary stud or finger-piece above the thumb-piece *n*, so that the two may be grasped in lifting the piece *n;* and it will be apparent that when this piece *n* is raised up the bolt will be withdrawn from the pinion, so that the sash is free to be raised or lowered, and the reverse.

If the rack is put upon the sash the pinion and bolt will be upon the frame. This is especially convenient with windows that have an upper outer sash. In this case the bolt will be upon the lower end of the vertical arm of the bent lever, as said lever can be placed close to the pinion.

I claim as my invention—

The combination, with the toothed rack *c* and pinion *h*, of the sliding bolt *k*, bent lever *l*, working upon the fulcrum *i*, and vertical sliding thumb-piece *n*, substantially as set forth.

Signed by me this 25th day of June, A. D. 1877.

FREDERICK CASPAR.

Witnesses:

GEO. T. PINCKNEY,

HAROLD SERRELL.