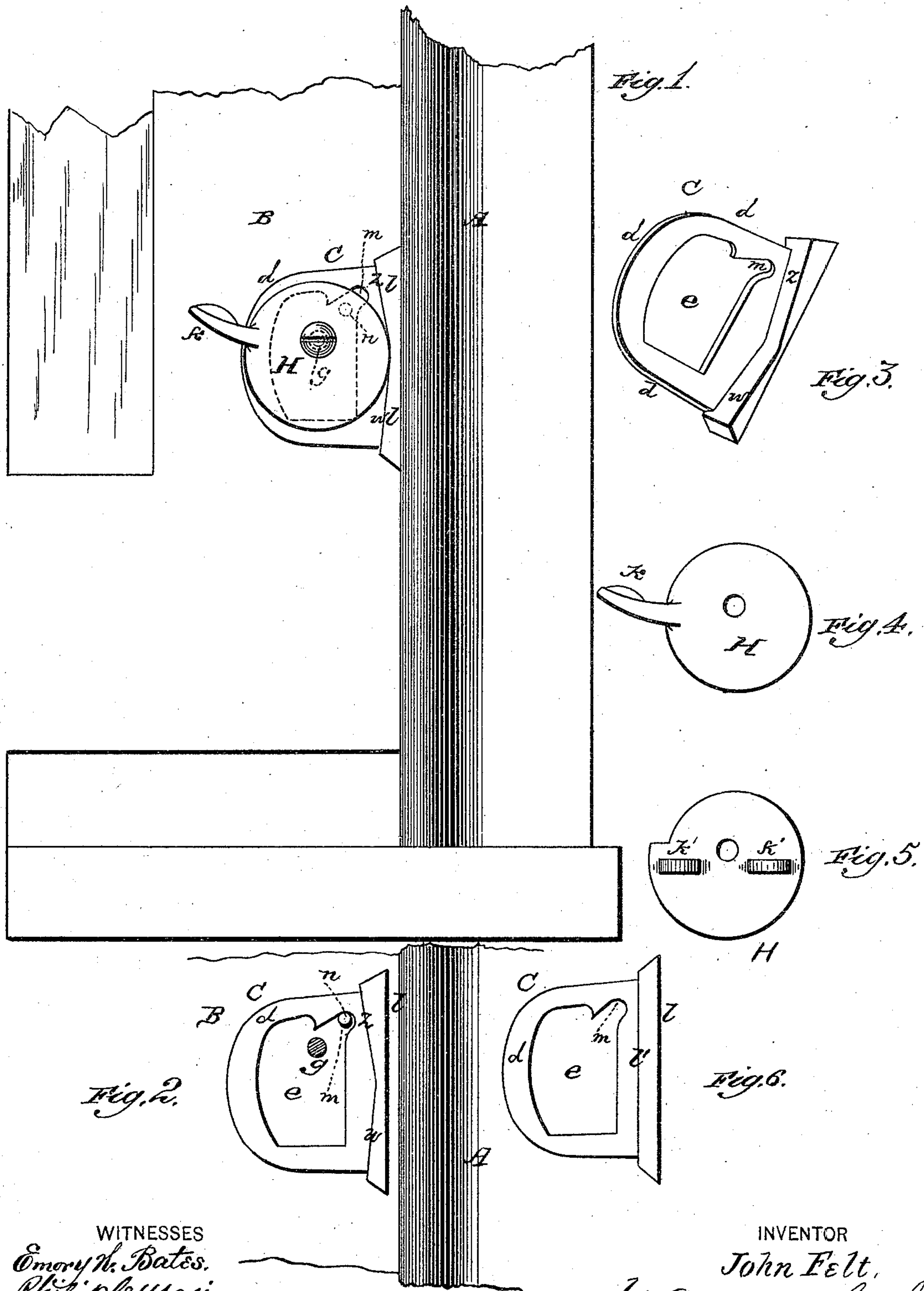


(Model.)

J. FELT.
SASH HOLDER.

No. 286,125.

Patented Oct. 2, 1883.



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UNITED STATES PATENT OFFICE.

JOHN FELT, OF CLAYTON, NEW YORK.

SASH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 286,125, dated October 2, 1883.

Application filed July 29, 1882. (Model.)

To all whom it may concern:

Be it known that I, JOHN FELT, a citizen of the United States, and a resident of Clayton, in the county of Jefferson and State of New York, have invented a new and valuable Improvement in Window and Sash Locks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a face view of a sash showing my lock. Fig. 2 is a similar view, having the cam removed. Figs. 3 and 4 are detail views, and Figs. 5 and 6 are modifications of the eccentric and sash-plate.

This invention has relation to sash-holders; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claim appended.

In the accompanying drawings, the letter A designates the sash-bead of the window-frame, and B the side bar of the sash-frame. C represents the sash-plate, composed of the marginal rib or friction-plate *l*, having the wedge or inclined surfaces *z w* on its inner side, and further provided with a flange, *d*, through which is made a slot, *e*, of sufficient vertical and lateral extent to allow the plate to move up and down, as well as sidewise, with reference to a central pivot-screw, *g*. On this screw is pivoted an eccentric, H, having a thumb-piece or handle, *k*. The screw *g* passes through the slot *e* of the sash-plate, and holds the eccentric in position against the flange *d*. *m* is a notch in the side or angle of the slot *e*, one side of which has such an elevation from the horizontal that when falling on the pin *n*, driven into the sash-bar just below it, it will slide thereon, carrying the sash-plate C downward and back from the sash-bead A. The location of the notch *m* is such that when the sash-plate C is suspended on the pin *n* the engagement-edge of the marginal rib *l* will be vertical. At the outer edge of the plate C is formed a marginal rib or friction-plate, *l*, the outer wall or bearing of which is a plane surface and extends in the vertical direction, and is designed to engage the sash-bead. The in-

ner shoulder or bearing-wall may be a flat surface also, parallel with the outer, as shown at *l'*, Fig. 6, but is preferably made as shown at *z w* in Figs. 1, 2, and 3 of the drawings—that is, double inclined—so that the marginal rib shall consist of an upper wedge-bearing, *z*, and a lower wedge-bearing, *w*, joined at about the middle of the rib by their inner ends, as indicated in the drawings. The inclined bearing of the upper wedge is steeper than that of the lower wedge, its angle being designed to more than compensate for the falling back of the edge of the eccentric when turned so as to bring its shorter radii toward the rib or friction-plate, caused by attempting to raise the sash without reversing the eccentric. The fastening is designed to be used on the right-hand side of the window; but it can be used on the left-hand side also, or on the sash-bead. When the eccentric is turned to bring its edge into engagement, it acts in a horizontal direction against the marginal rib of the slotted plate, and presses the same against the sash-bead without any descent of the sash, which is forced horizontally in the opposite direction. Should the eccentric not have been sufficiently turned, however, and the sash commence to fall, the eccentric will roll on the lower wedge, *w*, (or on the flat rib *l'*, should that construction be used,) of the rib or friction-plate *l*, which will not descend, owing to its friction against the casing, and because there is nothing acting on it to cause it to move downward except its own gravity. The moment the eccentric rolls on the inclined bearing the sash becomes tightened both by the action of the wedge and that of the eccentric, and even if the eccentric should slide, instead of rolling, the wedge *w* will come into action and secure the sash, preventing it from falling.

By the employment of both of the eccentric and sliding wedge-plate I am enabled to use a cam of comparatively small eccentricity, which has great power to act on the plate and casing. Ordinarily the eccentric presses against both wedges, the lower, serving, effectively to prevent accident in case the cam should not turn in descending. In this manner the certainty of the fastening is provided for, even when operated without much care. As it is desirable that the upper sash may be securely fastened

without any descent thereof in the operation, the means of doing so are provided for by the wide slot in flange *d*, allowing the sash-plate to move in a direction exactly horizontal, which it must do when the sash is held from falling during the operation of fastening. In order to raise and lower the sash freely, the thumb-piece or handle should be thrown over toward the sash-bead, so that the eccentric will recede from the marginal rib and the sash-plate fall, bringing the notch *m* upon the pin *n*, upon which it will slide back from the casing, securing the latter from wear and injury.

The object of the upper wedge, *z*, is to provide means for effectively locking the sash down when required. The sash having been lowered, the eccentric is well turned, so that it is forcibly pressed against the wedges at their meeting point. If, now, an attempt be made to raise the sash, the eccentric will commence to roll upward on the upper wedge. This, were it not for the upper wedge, would take off the pressure on the casing; but the steepness of the upper inclined plane a little more than compensates for the receding of the cam, so that a very powerful pressure is exerted on the casing by the upward movement, and the sash securely locked down. When the rib of the sash-plate is flat-faced on both sides, the handle of the cam is to be placed on the side of it opposite the shortest radius, in which case it will act against the rib of plate *C* whichever way it may be turned. When the rib *l* is not wedge-shaped, as at *z w*, the sash is fastened up by carrying the handle downward, and it is fastened down by turning the cam in the opposite direction; but with the double-wedge wall *z w* the cam is to be turned only in one direction, whether in locking down or up.

A modification of the eccentric is shown by Fig. 5 of the drawings, the contour of which is that of a spiral, instead of a circle. It will be seen that this form brings the longest and shortest radii side by side, so that the full amount of eccentricity is not obtained without an entire revolution of the eccentric, the two thumb-pieces *k' k'* permitting this, by which means the power of the eccentric is doubled,

and is nearly the same in one position as in another, and there are no dead-points at all.

A sash-holder consisting of a sliding bent and folded pressure-plate provided with a notched and folded elastic facing and an elongated slot, a body-piece, and an eccentric-lever so arranged that by pulling down on the eccentric the pressure-plate will be forced against the sash-strip and make a secure fastening at any point, is old. A double-beveled key similar in form to the flange *l z w* has been combined with a case holding the key with its flange and containing a friction-roller, as shown in Patent No. 112,985, of March 21, 1875. A plate having a double-inclined slot, through which the fastening-screw passes into the sash and forms the pivot for an eccentric-lever, has been provided on one side with a rib or shoulder, the outer edge of which is plane and the inner edge composed of two inclined surfaces extending from the ends toward the middle, and that a face-plate constructed with a segmental ratchet on its face, and with a recess underneath, in which an angular plate slides when acted upon by an eccentric-disk, which is pivoted on the said face-plate and operated by a handle and ratchet-bar, is also old, and I claim none of these constructions, broadly, herein.

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

A slotted sash-plate having a marginal rib or friction-plate, *l z w*, along its engagement-edge, operated in connection with an eccentric, *H*, and a wide slot, *e*, formed with a notch, *m*, having an inclined upper edge to engage the pin *n* in the sash-bar, whereby said sash-plate will slide diagonally downward and backward from the sash-bead when relieved from the pressure of the eccentric, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN FELT.

Witnesses:

EDWARD C. ROGERS,
FRED L. AMES.