

L. W. KNIGHT.
Sash-Fastener.

No. 205,278.

Patented June 25, 1878.

Fig. 2.

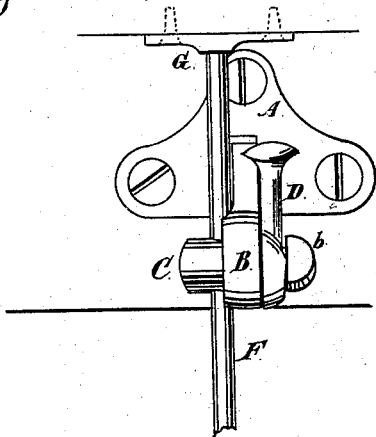


Fig. 3.

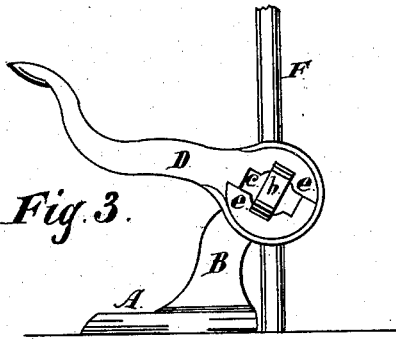


Fig. 1.

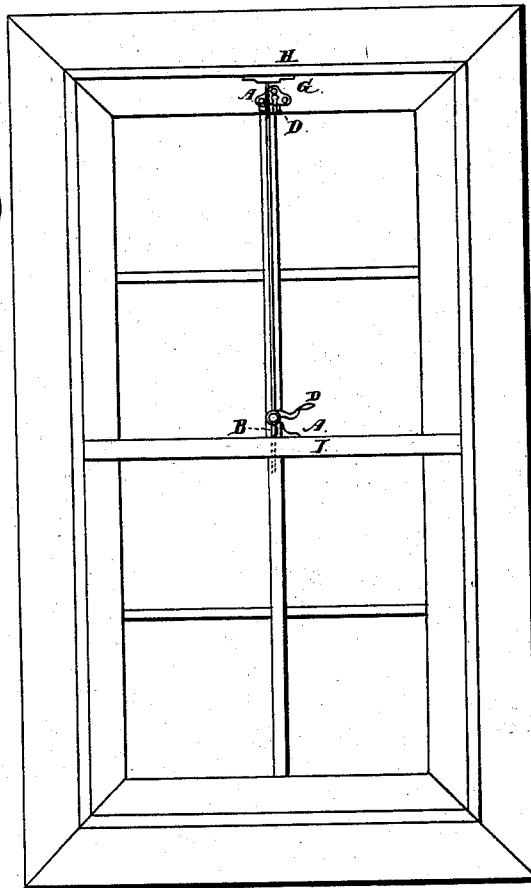


Fig. 4.

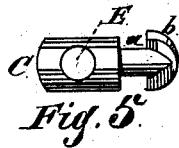
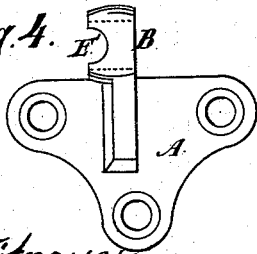


Fig. 6.

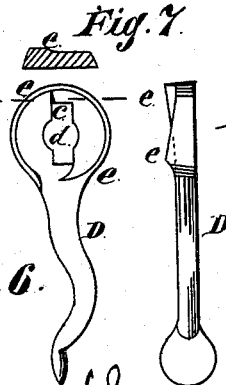


Fig. 8.



Witnesses:

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UNITED STATES PATENT OFFICE.

LYMAN W. KNIGHT, OF ELGIN, ILLINOIS.

IMPROVEMENT IN SASH-FASTENERS.

Specification forming part of Letters Patent No. 205,278, dated June 25, 1878; application filed December 24, 1877.

To all whom it may concern:

Be it known that I, LYMAN W. KNIGHT, of the city of Elgin, Kane county, State of Illinois, have invented new and useful Improvements in Window-Sash Fasteners, of which the following is a full description, reference being had to the accompanying drawing, in which—

Figure 1 is a front elevation; Fig. 2, a front elevation of the fastening for the upper sash; Fig. 3, a side elevation of the fastening for the lower sash; Fig. 4, a detail of the support or bracket; Fig. 5, a detail of the stud; and Figs. 6, 7, and 8, details of the lever. Figs. 2 to 8, inclusive, are enlarged.

This invention relates to that class of sash-fasteners in which the locking device operates upon a vertical rod secured to the window-frame. Its object is to improve the devices which act upon the rod for the purpose of fastening the sash in any desired position; and its nature consists in providing a lever having two cams or inclines, arranged opposite to each other, which act upon a movable stud supported on a bracket or plate, through which stud the vertical rod passes, the action of the lever-cams or inclines upon the stud serving to tighten or loosen the clasp upon the rod, all as hereinafter more fully described and claimed.

In the drawings, A represents the base-plate; B, the support or bracket; C, the movable stud or clasp; D, the locking-lever; E, the opening in the stud; E', the corresponding opening in the bracket B; F, the vertical rod; G, the plate at the top of the rod F; H, the top of the window casing or frame; I, the upper cross-piece of the lower sash; *a*, the trunnion or support for the lever; *b*, the head of the stud; *c*, the slot or opening in the head of the lever; *d*, the circular portion of the opening; and *e*, the inclines or cams on the head of the lever D.

The base-plate A and bracket or support B, as shown, are cast or formed in one piece, the plate being of any suitable form to enable it to be secured to the window-sash, suitable holes for the passage of screws for this purpose being provided, and the bracket projecting out from the plate in such manner as that

when secured to the sash it will stand some distance away from the sash.

The stud or clasp C is made in the form shown in Fig. 5, that portion of it which is provided with the hole E being of a circular form and adapted to enter a hole provided for it in the head or end of the bracket B, as shown in Fig. 2. The hole E in this stud C is a little larger than the size of the vertical rod with which the fastener is to be used, and in the head of the bracket B is a hole, E', of a size similar to E, the holes E E', when the parts are in position, being in line, to enable the vertical rod to be inserted. The other portion, *a*, of the stud C is smaller, and terminates in a head, *b*, formed as shown in Figs. 2, 3, and 5, which head *b* is narrow in one direction, but in the other is of the same width as the diameter of the large portion of the stud. The portion *a* of the stud forms a trunnion or pivot, on which the lever D turns.

The locking-lever D is formed as shown in Figs. 2, 3, 6, and 7. The head of this lever is provided with a slot or opening, one portion, *c*, of which is of a form to enable the lever to be slipped over the head *b*, and the other, *d*, is of a form to enable the lever to turn on the portion *a* of the stud when in place. The head of the locking-lever is also provided with two inclines or cams on its outer edge, one of which slopes from the upper end of the lever or head toward the handle, and the other slopes from the handle toward the upper end, the angle of both the inclines being the same, and their arrangement on the head such that they will correspond in height and slope. The handle of this lever D may be of the form shown, or of any desired form.

The vertical rod F may be of any desired size, the size of the rod being a little less than the diameter of the hole E in the stud C. This rod F is secured at the top to the upper casing H by means of the plate G and suitable screws, and its lower end extends down to the bottom of the lower cross-piece of the upper sash, a suitable opening being provided between the sash for its passage.

Two fastenings are to be used, one for the upper and one for the lower sash. The plate and bracket for the upper fastening are to be

so formed as to enable the fastening to be secured to the face of the middle vertical piece of the sash; and the plate and bracket for the lower sash are to be so formed as to enable the fastening to be secured to the top of the upper cross-piece of the lower sash.

In attaching the fastening to the sash, the studs C are passed through the bearings for them in the head B and the rod F passed through the holes E of the stud, the rod being passed through the stud of the fastening for the upper sash first; then the rod F is secured to the upper portion of the frame or casing by the plate G and screws; then the plate of the upper fastening is secured to the center vertical strip of the upper sash; then the plate of the lower fastening is secured to the top of the upper cross-piece of the lower sash; then the levers are slipped over the head *b* and onto the portion *a* of the stud, the inclines or cams being toward the head *b*, when the device is ready for use.

In use, when it is desired to lock the sash, the operator takes hold of the handle of the locking-lever D and pulls down thereon, which turns the head of the lever on the trunnion *b*, bringing the inclines or cams *e* into contact with the inner faces of the head *b*, which causes the stud C to be drawn toward the head of the lever, forcing the rod F against the face of the opening E', and holding the sash firmly between the stud C and bracket B, preventing it from being moved in either direction.

To unlock the sash, the operator turns the locking-lever up, which releases the contact

of the inclines or cams *e* with the head *b* and loosens the clasp of the stud upon the vertical rod, allowing the sash to be moved up or down, as desired, and when the desired position is reached the sash can be locked in that position, as before described.

The head or bracket B for the stud might be so constructed as to enable it to be attached to the sash directly, the bracket having a screw-threaded shank or other device to enable it to be secured to the sash; but the form shown will be found the easiest for securing it to the sash.

The portion *a* might be provided with a pin in place of the head *b*, with which the cams or inclines could engage to operate the stud.

I am aware that window-fastenings consisting of a vertical rod and a clasp device operating the rod have been used, and hence do not claim, broadly, such a device; but

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

1. The lever D, provided with the cams or inclines *e*, in combination with the stud C, provided with the head *a*, substantially as and for the purposes specified.

2. The lever D, provided with the cams or inclines *e*, and stud C, provided with head *a* and hole E, in combination with the support A B and rod F, substantially as and for the purposes specified.

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Witnesses:

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