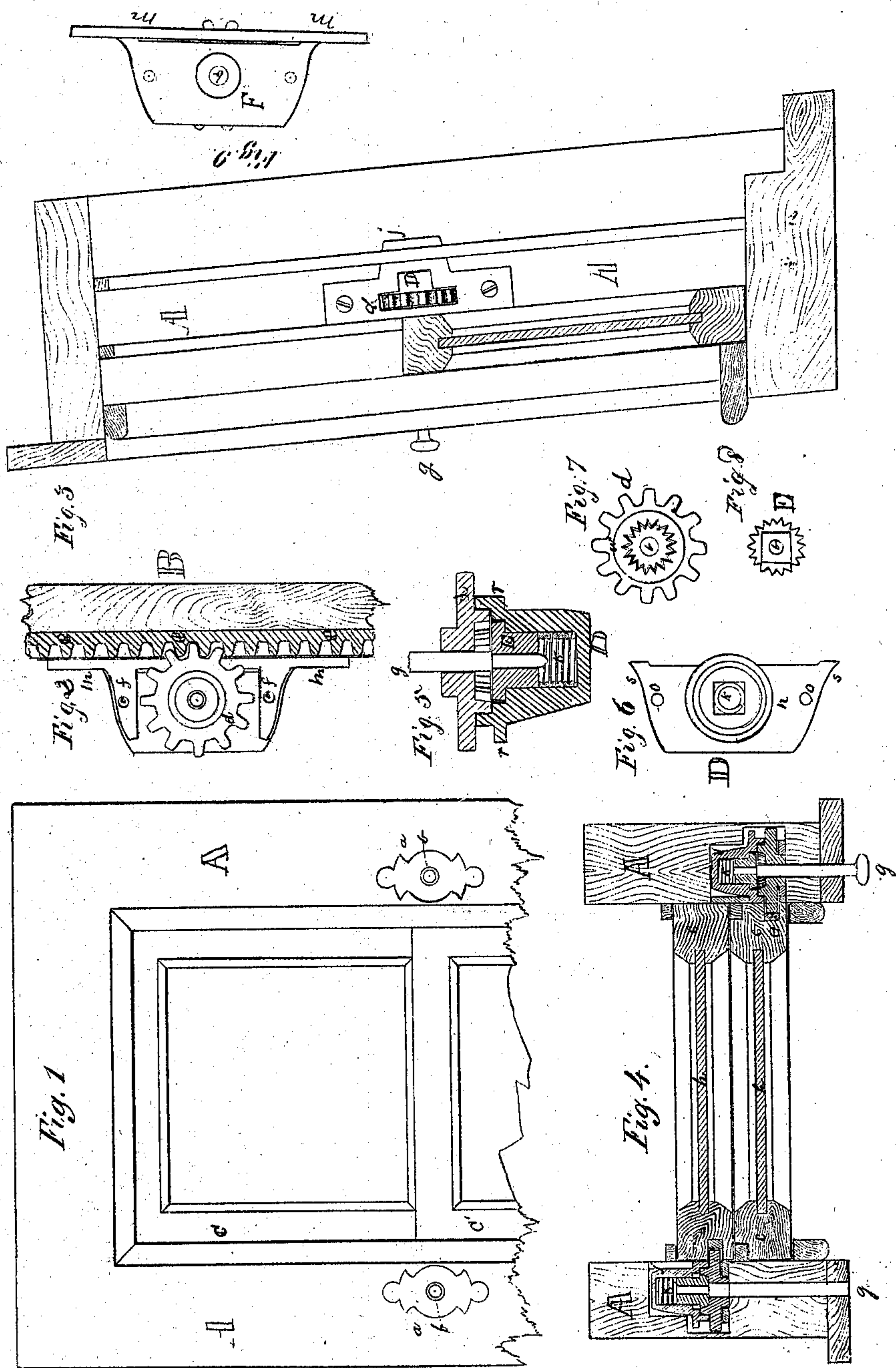


*C. Hicks,*  
*Sash Fastener*  
*No. 95,110.*

*Patented Sep. 21. 1869.*



*Witnesses*  
*Edward G. East*  
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# UNITED STATES PATENT OFFICE.

COLEMAN HICKS, OF LANCASTER, KENTUCKY.

## SASH-HOLDER.

Specification forming part of Letters Patent No. 95,110, dated September 21, 1869.

*To all whom it may concern:*

Be it known that I, COLEMAN HICKS, of the town of Lancaster, in the county of Garrard, and in the State of Kentucky, have invented certain new and useful Improvements in the Construction of Sash-Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention consists in providing sash for windows with locks so constructed and operated that sashes, when sliding up and down or back and forth horizontally, in their frames, may, when stopped, be easily and quickly locked at the point of stopping by the use of a simple key, which may be inserted or withdrawn at pleasure.

To enable others skilled in the art to make and use my invention, I will proceed to describe the construction and operation of the same.

In the drawings, Figure 1 represents a front view of facings of a window with upper sash and part of lower sash in position. Fig. 2 represents a vertical and side view of rack and pinion and a section of the facing and frame. Fig. 3 represents a cross-sectional view of the lower sash and inside view of the left facing and frame. Fig. 4 represents a horizontal sectional view taken through the center of the two locks, sashes, glass facings, and frame. Fig. 5 represents a horizontal sectional view of the lock, taken through its operative parts. Fig. 6 represents a side view of the flanged cylinder D. Fig. 7 represents a front side view of pinion *d*. Fig. 8 represents a perspective view of the clutch-nut E, and Fig. 9 a side view of plate F and edge of plate *m*.

In Fig. 1, A A are the inside casings, *c* the upper sash, and *c'* the lower sash; *a a*, the escutcheon, and *b b* the key-holes. These parts need no further description.

In order to introduce my lock, a toothed rack, *e*, Fig. 2, is made, either by casting it in a mold or by means of a suitable male and female die, bending a suitable strip of sheet metal into the form desired, and that rack is let into the left side of the left stile of the upper sash along its entire length, so that when viewed from the front of the sash even the teeth would not be visible, and in a similar manner the right side of the right stile of the

lower sash will be provided with another rack.

The whole of the operative parts of my lock is let into and buried in the frame, so that it is covered and concealed by a metal plate, *m*, except a few of the teeth of the pinion *d*, as shown in Fig. 3, and when the sash is in place they are half concealed.

The locks for both sashes are placed in the frames at the same height and on a level with the meeting rails of the sashes, as shown in Fig. 1.

The pinion, when placed upon an axis, as shown in Fig. 3, will be revolved by the teeth of the rack when the sash is raised or lowered; and next I will give a more detailed description of the lock itself. The form of the front side of the pinion *d* is shown in Fig. 2, a short journal, *t*, being raised up, as shown, and the form of the rear side, as shown in Fig. 7. A short journal, *w*, is raised up on that side also, and the interior of that journal is to correspond with and fit over the teeth of the clutch-nut E, both the pinion and the clutch-nut being perforated with the key-hole *b*. In Fig. 8 that clutch-nut appears with its square shaft upward; but in Fig. 5 the form and proportions of the square shaft better appear. A view of the flanged cylinder D—a front view of it—is presented in Fig. 6, a side sectional view in Fig. 5, and a horizontal sectional view in Fig. 4. The front end, *n*, of the cylinder D is hollowed out to fit over and turn upon the rear journal of the pinion, the opening is continued, a little reduced in size, a sufficient depth to accommodate the teeth of the clutch-nut; and it is then made to assume a square form, to correspond with and fit over the square shaft of that nut, and to continue in that form so much farther that it will afford space in which to seat the spiral spring *k*. When these parts have received their proper forms, the spring is seated, the clutch-nut is inserted with the end of the square shaft against the spring, and the front end of the cylinder is placed over the rear journal of the pinion, and then a metal plate, F, corresponding in form and thickness to the flange of the cylinder D, with holes corresponding to these marked *o o*, Fig. 6, and with female threads in them. This plate furnishes a bearing for the front journal of the pinion and becomes a part of the frame of the lock, as will hereinafter appear. The next important part in that frame-work is the plate *m*, a



front view of which is shown in Fig. 3 and a side view in Fig. 2. It is a plain flat plate of uniform thickness, and of sufficient thickness to afford the strength required, with two tongues, *f f*, projecting from its rear surface, each with a hole passing horizontally through it. These tongues are formed with reference to the flange of the cylinder and the plate before described, so that when the plate *m* is placed over the teeth of the pinion and cylinder, as shown in Fig. 3, the two tongues will pass between said flange of cylinder *D* and the said plate *F*, so that screw-bolts inserted in the holes may pass through the holes *v v* in the tongues and be screwed through the screw-holes in the plate before described, and thus the operative parts of the lock will be bound together, and then, by means of screw-bolts passed through the holes in each end of the plate *m* and into the frame, the whole lock is made fast therein.

It will be noticed that the clutch-nut is made with a hole through its center. This is not essentially necessary.

Having described the construction of my lock, a few words will be sufficient to explain its operation, if that is not already apparent. The length and stiffness of the spiral spring *k* or other spring employed are made sufficient to press and hold the end of the clutch-nut, which is provided with teeth entirely within the rear journal of the pinion, these teeth having the form of saw-teeth, the crown of each being a sharp edge, and the rear journal having an interior space and indentations exactly corre-

sponding. Now, by inserting a key, *g*, in the key-hole *b*, it may be passed through to the head of the clutch-nut *E*, or, if it be perforated, into the hole therein, so that the shoulder of the key will press against the end thereof. Then by pressing upon the head of the key with the hand the spring *k* is compressed and the teeth of the clutch-nut are forced out of gear, free from the pinion, which may then be made to revolve freely by raising or lowering the sash.

It will be apparent from the foregoing description that by the use of my lock a sash may be locked at any point, and as well at one point as at another, and that it locks instantly by relieving the end of the key from pressure.

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

1. The clutch-nut *E*, with its toothed flange and square shaft, constructed substantially as described, in combination with the pinion *d* and spring *k*, as a device for locking and unlocking a window-sash, all constructed and arranged substantially as and for the purpose described.

2. The flanged cylinder *D*, the pinion *d*, the rack *e*, spring *k*, clutch-nut *E*, all constructed and arranged substantially as described, when in combination, as parts of a sash-lock, as above set forth.

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Witnesses:

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