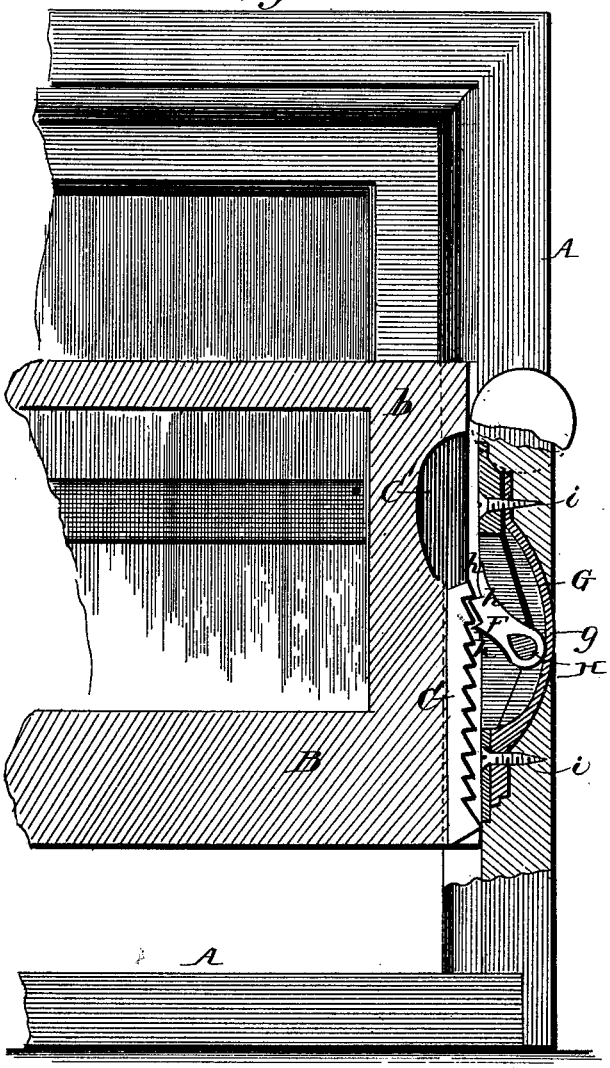
C. G. MILLER & T. F. LOESCHER.

Sash-Holder.

No. 219,869. Patented Sept. 23, 1879.

Fig. 1.



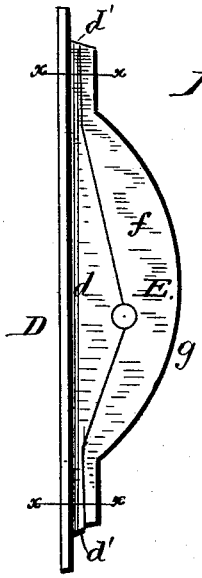


Fig. 2.

Fig. 3.

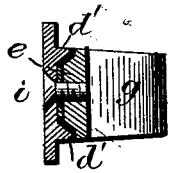


Fig. 4.

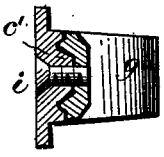
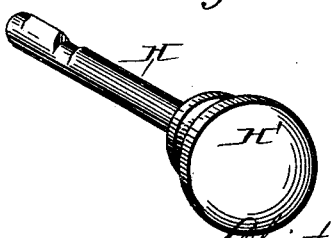


Fig. 5



Witnesses

Fred. G. Dieterich

August Peterson

Inventor

Christian G. Miller

Theodor F. Loescher.

by Louis Bagger & Co.

Attorneys

UNITED STATES PATENT OFFICE.

CHRISTIAN G. MILLER AND THEODOR F. LOESCHER, OF FORT DODGE, IOWA.

IMPROVEMENT IN SASH-HOLDERS.

Specification forming part of Letters Patent No. **219,869**, dated September 23, 1879; application filed July 26, 1879.

To all whom it may concern:

Be it known that we, CHRISTIAN G. MILLER and THEODOR F. LOESCHER, of Fort Dodge, in the county of Webster and State of Iowa, have invented certain new and useful Improvements in Sash Holder and Lock; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a vertical section of a window frame and sash provided with our improved holder. Fig. 2 is a side view of the lock or holder case detached from the frame. Figs. 3 and 4 are cross-sections on lines *x x* and *y y*, Fig. 2, respectively; and Fig. 5 is a perspective view of the key for operating the lock detached.

Similar letters of reference indicate corresponding parts in all the figures.

This invention has relation to that class of devices known as "sash locks or holders;" and consists in the construction of the lock-case and the combination therewith of the key, lock, and its operating-spring, substantially as hereinafter more fully set forth.

In the drawings, A is the window-frame, and B one of its sashes. One of the side rails, *b*, of this is grooved longitudinally, and provided with a toothed rack, C, in said groove, the upper part of which above the rack is deepened to form a semicircular recess, C′, as shown in Fig. 1.

The lock-case consists of two detachable parts, made preferably of cast-iron—viz., a face-plate, D, and back plate, E. The former is made with two parallel rearwardly-projecting wings, *d*, of triangular shape, hollowed out at the apex to form half-boxes, which receive the journals of the operating-key.

The triangular wings *d* terminate at each end of plate D in flanges *d′ d′*, and one end of the plate has a raised part or shoulder, *c′*, between said flanges, which fits into a corresponding recess in the corresponding part of the face of the back plate, E, while the other end of said plate has a step or shoulder, *e*, fitting between the flanges *d′ a′* at the opposite end of plate D, registering therewith.

The back plate, E, has two parallel wings, *f*, each of which is made with a triangular recess to fit the projecting wings *d d* of the face-plate D and a curved back piece, *g*, so that plates D and E will together form a hollow flanged box, into which the lock or holder, with its operating parts, is inserted.

The side wings, *f*, of plate E have half-boxes, which register with the half-boxes of the wings *d* of the face-plate D, so that when the parts D E are put together complete boxes are formed for the insertion of the key.

The lock or holder proper consists of an arm, F, having an oblong perforation at one end, and provided with three or more sharp-edged notches or teeth, *h*, at the opposite end, which, in operating the lock, engage with the notches of the rack C in the sash.

A spring, G, is inserted back of arm F, with its lower end impinging against said arm, and its upper end, which is perforated, inserted between the flanges *d′ d′* in the upper part of the case, so as to be clamped by its two parts, D E, and thus be held firmly in place.

The perforation in the upper end of spring G registers with perforations in plates D and E, and similar (countersunk) perforations are made in the lower ends of said plates to receive screws *i*, by means of which the lock-boxes are secured in recesses made for their reception in the window-frame. These screws therefore serve the triple purpose of securing the boxes in the frame, holding the two component parts D E of each box together without other fastening devices, and holding the spring G in its place between the parts D and E.

The key H has a knob or handle, H′, at one end, and is shaped at the other end to fit the oval opening in the inner end of the serrated lock bolt or arm F. That part of the key immediately upon each side of the lock-bolt is filed round to form journals, which fit and rotate in the boxes formed in the side wings, *d f*, of plates D E, respectively, as described, so that the key may be readily turned, while at the same time it cannot slip out of the lock or of the box into which it is inserted.

From the foregoing description, taken in connection with the drawings, the operation of our invention will be readily understood without further explanation.

When the sash is down, the lock-bolt F will project into the recess C′ in the sash-rail above the toothed rack C, and when the sash is raised the teeth of the bolt or lock will, impelled by spring G, engage with the notches in the rack-bar.

To release the lock and lower the sash, the key is turned to the right against the spring, so as to disengage the teeth of the lock from the bar, when the sash will fall down to a closed position by its own gravity.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. A box for sash locks or holders, composed of the face-plate D, having side pieces or wings, *d*, flanges *d′ d′*, and raised step or shoulder *c′*, and back plate, E, having recessed side pieces or wings, *f*, and raised step or shoulder *e*, constructed and combined substantially as and for the purpose herein shown and described.

2. In a box for sash locks or holders, constructed substantially as described, the combination, with the flanged face-plate D and stepped or shouldered back plate, E, of the spring G, whereby the said spring is clamped between said plates D E, which together form the lock-box, substantially as set forth.

3. In a sash lock or holder, the combination of the face-plate D, spring G, back plate, E, lock-bolt F, and its operating-key H, all constructed and combined to operate substantially in the manner and for the purpose herein shown and set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

CHRISTIAN G. MILLER.
THEODOR F. LOESCHER.

Witnesses:
FRANK FARRELL,
W. C. BAEHRING.