W. H. KING.
Sash-Fastener.

No. 212,015. Patented Feb. 4, 1879.

Fig. 1.

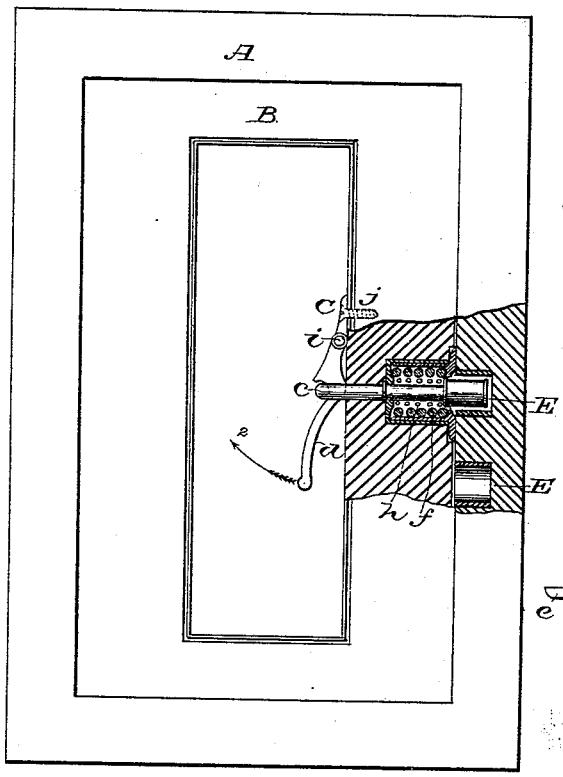


Fig. 2.

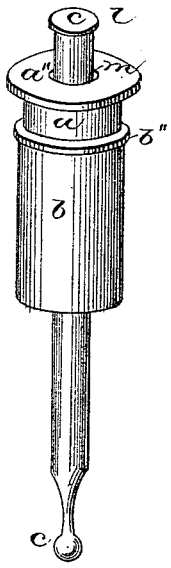


Fig. 3.

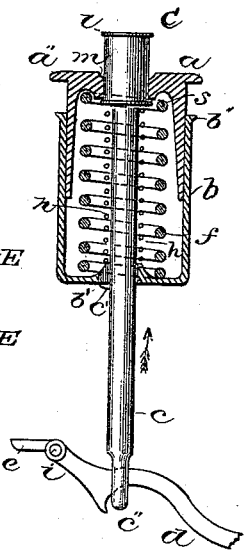


Fig. 4.

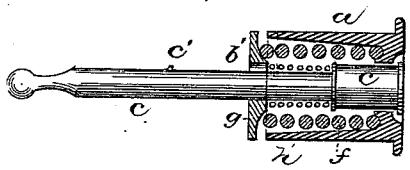
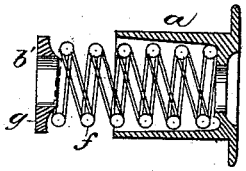


Fig. 5.



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UNITED STATES PATENT OFFICE.

W. HASKELL KING, OF ATHOL, MASSACHUSETTS.

IMPROVEMENT IN SASH-FASTENERS.

Specification forming part of Letters Patent No. **212,015**, dated February 4, 1879; application filed December 2, 1878.

To all whom it may concern:

Be it known that I, W. HASKELL KING, of Athol, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Sash Supports and Bolts, of which the following is a specification:

This invention relates to that class of sash-holders in which the sash is supported by spring-tension, and its object is to provide a compact, cheap, and reliable device which will support the sash at any point, and also furnish a positive lock at suitable points intermediate of the distance through which the sash moves.

It consists of a plunger operated by a spring for forcing it against the jamb or window-frame, and a bolt playing within said plunger and operated by an independent spring, the plunger and bolt being adapted to engage and move together, when desired, as hereinafter more particularly described.

The plunger has a suitable flange or head, which operates upon the jamb by spring-pressure, and the bolt is forced by its spring into suitable recesses formed in the jamb.

In the accompanying drawings, Figure 1 is an inside view of a window sash and frame, partly broken away, showing my invention applied thereto. Fig. 2 is a perspective view of my improved sash-holder detached. Fig. 3 is a longitudinal section near the center of same, with an operating-lever. Fig. 4 is a sectional view of a modification of the invention, with the bolt in full lines. Fig. 5 is a similar view, with the plunger-spring detached.

The letter A indicates the window-frame, and B the sliding sash, both the frame and sash being partly broken away, in order to show the application of my invention. The letter *b* designates a cup-shaped socket or shell, having a central opening, *b'*, through its bottom or headed end, and a lip, *b''*, projecting outward from its open end or mouth. A hollow plunger, *a*, having a flange, *a''*, fits and plays within the cup-shaped socket, and has its outer end closed, except a central opening, through which plays a bolt, C, having a stem, *c*, which passes centrally through the plunger *a* and socket *b*, projecting through the central opening of the said socket. This bolt has at about the middle of its length a projection, *c'*, which limits its play in the direction of the arrow through the socket *b*, and a loop, *c''*, on the outer edge of the stem, forms a means for its engagement with a lever, *d*, by which the bolt is operated. This lever *d* is pivoted at *i* to a bracket, *e*, adapted to be secured to the inner edge of a vertical sash-rail.

The letter *f* indicates a spiral spring, arranged around the stem *c* of the bolt, and within the cup-shaped socket *b* and hollow plunger *a*, one of its ends bearing against the inner surface of the head of the plunger, and the other against the inner surface of the bottom or head of the socket.

The tension of this spring is such that when left free it forces the plunger out of the socket about one-third of its length. A small spiral spring, *h*, is arranged around the stem *c* of the bolt, inside the coil of the spring *f*, and one of its ends bears against the shoulder *s* of the bolt at its junction with the stem, and the other end bears against the inner surface of the socket-head, the tension of this small spring being such that it forces the bolt out of the plunger as far as permitted by the projection *c'*.

In applying my invention to use, a socket is formed in the outer edge of the vertical sash-bar, as shown in Fig. 1, of such size as to snugly receive the body of the metal socket *b*, the socket in the wood being slightly flared to receive the lip *b''*, and countersunk to receive the flange *a''* flush with the edge of the sash. From the inner end of the socket in the wooden sash a hole is bored through inwardly, to permit the passage of the bolt-stem, the loop end of which projects beyond the inner edge of the sash-bar. The lever *d* passes through the loop *c''* of the bolt-stem, and the bracket *e*, to which the lever is pivoted, is secured to the inner edge of the sash-bar, in position to hold the lever at the proper point to operate the bolt. Suitable sockets E are formed in the window-frame to receive the bolt. These sockets may be lined with metal thimbles, and are arranged at points at which it is desired to support the sash.

If desired, the holder may be arranged in the window-frame, and the sockets and thimbles for engaging the bolt may be arranged in the sash; but, as a rule, I prefer the arrange-

ment shown in Fig. 1, the holder being applied to the sash. When the sash is to be raised, the lever is moved by the thumb in the direction of the arrow, Fig. 2, and the bolt thus withdrawn from the thimble, a small lip, *l*, on the end of the bolt catching against the plunger and fitting in a recess, *m*, therein, and causing the plunger to be drawn into the socket *b*. All tension upon the sash is thus removed, and it may be moved up or down until the bolt coincides with another one of the thimbles E.

At whatever point the sash is left, the spring *f* forces the flange *a''* of the plunger snugly against the jamb, and thus effectually prevents any rattling of the sash. The pressure of the flange *a''* upon the jamb will support the sash at any intermediate point, and the bolt C, when in one of the thimbles, serves as a positive lock.

In the modification shown in Figs. 4 and 5, the outer metallic socket, *b*, is dispensed with, its place being supplied by a washer, *g*, which serves as an abutment for the inner end of the spring *f*. Even this washer may, however, be dispensed with, and the spring rest against the end wall of the wooden socket in the sash.

The socket *b*, washer *g*, and plunger *a* may be made of any suitable material; but I prefer iron, brass, or glass.

What I claim is—

1. The combination of the plunger *a*, bolt C, having a suitable stem, the springs *f* and *h*, and a suitable abutment for the ends of said springs, substantially as described.

2. The combination of the shell or socket *b*, plunger *a*, playing within said socket or shell, the bolt C, having shoulder *s* and stem *c*, and the springs *f* and *h*, substantially as described.

3. The combination of the plunger *a*, bolt C, having a suitable stem, spring *f*, having a suitable abutment, and the lever *d*, loosely connected with the end of the bolt, substantially as described.

W. HASKELL KING.

Witnesses:
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