A. M. HUDSON.

SASH FASTENER.

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Fig. 1

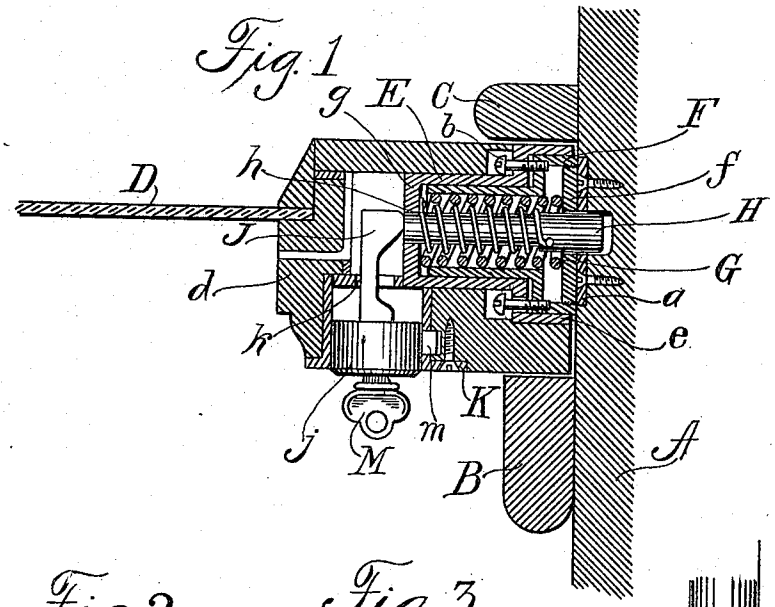


Fig. 2

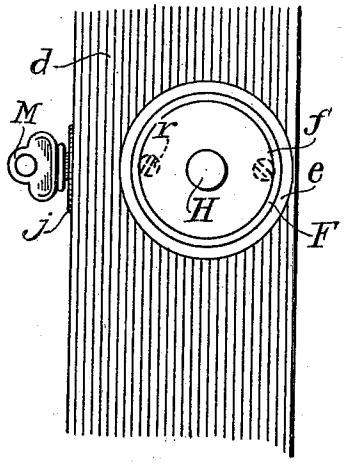
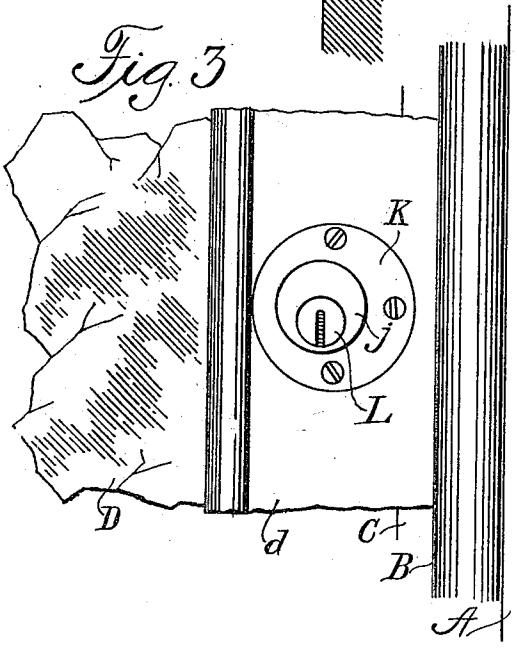


Fig. 3



Witnesses

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SASH-FASTENER.

1,194,022. Specification of Letters Patent. Patented Aug. 8, 1916.

Application filed March 18, 1914. Serial No. 825,525.

To all whom it may concern:

Be it known that I, ALEXANDER M. HUDSON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Sash-Fasteners, of which the following is a specification.

This invention relates to sash fasteners, and, as well, belongs in the class of devices, designed to secure windows, which are also equipped with means for frictionally supporting the sash at any point, whether or not the sash is provided with the usual sash weights.

The object of this invention is to produce a device of the nature stated whereof the parts have special construction and a particular arrangement one with regard to another whereby it is believed there results a considerable saving in the cost of manufacture, taking such articles generally now on the market, with greater strength, durability and convenience of operation.

Of the accompanying drawings, Figure 1 represents one of the side rails of a window sash and a portion of the window frame in section horizontally, showing all parts of this invention assembled; Fig. 2 is a view of a portion of the window sash, showing that surface of the sash usually against the window frame, and illustrating the positions of the outer casing of this invention, and the frictional plunger and bolt in the sash, and concentrically with respect to each other. Fig. 3 is a side view of a portion of the upright member or stile of the sash, and shows the position of the locking plunger with relation thereto.

In the drawings and description the same letter refers to the same part throughout.

Considering the drawings, the window frame A has the stop bead B and parting strip C, between which the sash *d* and the window pane D may be raised and lowered and guided up and down.

Within the sash *d* at any suitable place a cavity is formed within which is secured the outer hollow casing E, provided toward the end next to the window frame with a portion *e* of enlarged diameter as ordinarily constructed. Within the casing and movably supported by it is a correspondingly shaped plunger F, and one reason for increasing the diameter of the casing next to the surface of the frame A is to allow the outer end or face *f* of the plunger F to be made as large as practicable. A stout spring G coiled within the plunger and in contact with the inner surface of the face plate *f* and with the bottom of the casing E, referred to by the letter *g*, presses the plunger F always outwardly with respect to the casing, and, as illustrated, against the frame. That pressure creates sufficient friction to support the window sash at any point to which it may be raised. In practice the spring G may be of sufficient strength to support the raised sash even though no sash weights are employed. The hollow plunger F may, therefore, be termed a sash-supporting plunger.

To lock the sash in its lowered position the bolt H is introduced and arranged axially within the casing and the hollow plunger by which the bolt is supported and guided as illustrated. A spring *h* connected with the bolt and with the casing is constructed to normally withdraw the bolt. The machine screws *b* shown in Fig. 1 are merely to retain the plunger in place against spring G when the window sash is removed from the frame for any purpose.

To operate the bolt H there is provided the blade or stem J of a second plunger *j*, movable at right angles with the bolt. The plunger *j* is, in fact, a lock and is carried on the stile of the sash by means of its casing K as illustrated in Fig. 3. The bottom *k* of the casing K has an opening for the passage of the stem J, and, when the stem is a flat blade, as usually made, the opening is a slot that permits the passage of the blade but prevents it from rotating. In the positions set forth in Fig. 1, the sash is supposed to be down, and the bolt is engaged with the keeper *a* secured to the window frame A. As shown, the stem J has an inclined portion that moves the bolt into locking position when the lock plunger *j* is drawn outwardly. To move the plunger *j* in and out, it is believed to be within the purview of this invention to provide any kind of thumbpiece or handle, but, as the key M is employed any way, it is most convenient to actuate the plunger thereby. The position of the plunger *j* shown in Fig. 1 is its outermost or locked position. In drawing the plunger *j* outwardly into that position, the inclined portion of the blade J pushes the bolt H into its keeper *a* and holds it there so long as the plunger *j* occupies its outer

position shown. When the plunger is unlocked and pushed inwardly, the recess in the blade J allows the bolt H to retract. The bolt *m* of the lock plunger *j* engages the casing K as illustrated when the parts are locked.

In Fig. 2 are indicated by broken lines two small screws *r* used to secure the outer casing within the cavity in the stile of the sash.

In the operation of this invention, the plunger *j* is unlocked and the stem J moved inwardly until the spring *h* withdraws bolt H. Now, the sash may be raised and lowered, and, by reason of the frictional engagement of the hollow plunger F, that is to say, the face or end *f* thereof, the sash will be supported at any height, in the window frame.

Having now described this invention and explained the mode of its operation, I claim:—

1. In a sash fastener, the combination with a casing, of a hollow plunger fitting within and next to the casing and having an open end within the casing and a closed outer end, a coil spring within the plunger acting against the casing and plunger to force the plunger outwardly, a bolt passing centrally through the bottom of the casing and the said closed outer end of the plunger, a coil spring encircling the bolt, the said spring being attached to the bolt and to the casing and constructed to draw the bolt inwardly with respect to the casing, and a member movably supported adjacent to the bottom of the casing and constructed to force the bolt outwardly by one movement and by another movement to allow the bolt to retract.

2. In a sash fastener, the combination with a casing, of a hollow plunger fitting within and next to the casing and having an open end within the casing and a closed outer end, a coil spring within the plunger acting against the casing and plunger to force the plunger outwardly, a bolt passing centrally through the bottom of the casing and the said closed outer end of the plunger, a coil spring encircling the bolt, the said spring being attached to the bolt and to the casing and constructed to draw the bolt inwardly with respect to the casing, a member movably supported adjacent to the bottom of the casing and constructed to force the bolt outwardly by a movement in one direction, and means for locking the said member in its position at the end of said movement, the said member being movable in another direction to allow the bolt to retract.

3. In a sash fastener, the combination with a window frame provided with a keeper, of a window sash having a bolt arranged to engage the said keeper, a lock borne by the sash and having a movement bodily with respect to the sash and bolt, the said lock having a bolt whereby in one position the lock may be locked to the sash, and means connected with the said lock and actuated by the said bodily movement thereof for effecting the operation of the bolt first mentioned.

4. In a sash fastener, the combination with a sash, of a casing set in the sash, a hollow plunger movably fitting within and next to the casing and having an open end within the casing and a closed outer end, a coil spring within the plunger acting against the casing and plunger to force the plunger outwardly, a bolt passing centrally through the bottom of the casing and the said closed outer end of the plunger, a coil spring encircling the bolt, the said spring being attached to the bolt and to the casing and constructed to draw the bolt inwardly with respect to the casing, a member movable within the sash at right angles to the bolt, the said member being movable outwardly and inwardly with respect to the sash, the said member being constructed and arranged to force the bolt outwardly by the said outward movement of the member, and means for locking the said member in its position at the end of the said outward movement, the said member being constructed and arranged to allow the bolt to retract during the said inward movement of the member.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDER M. HUDSON.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."