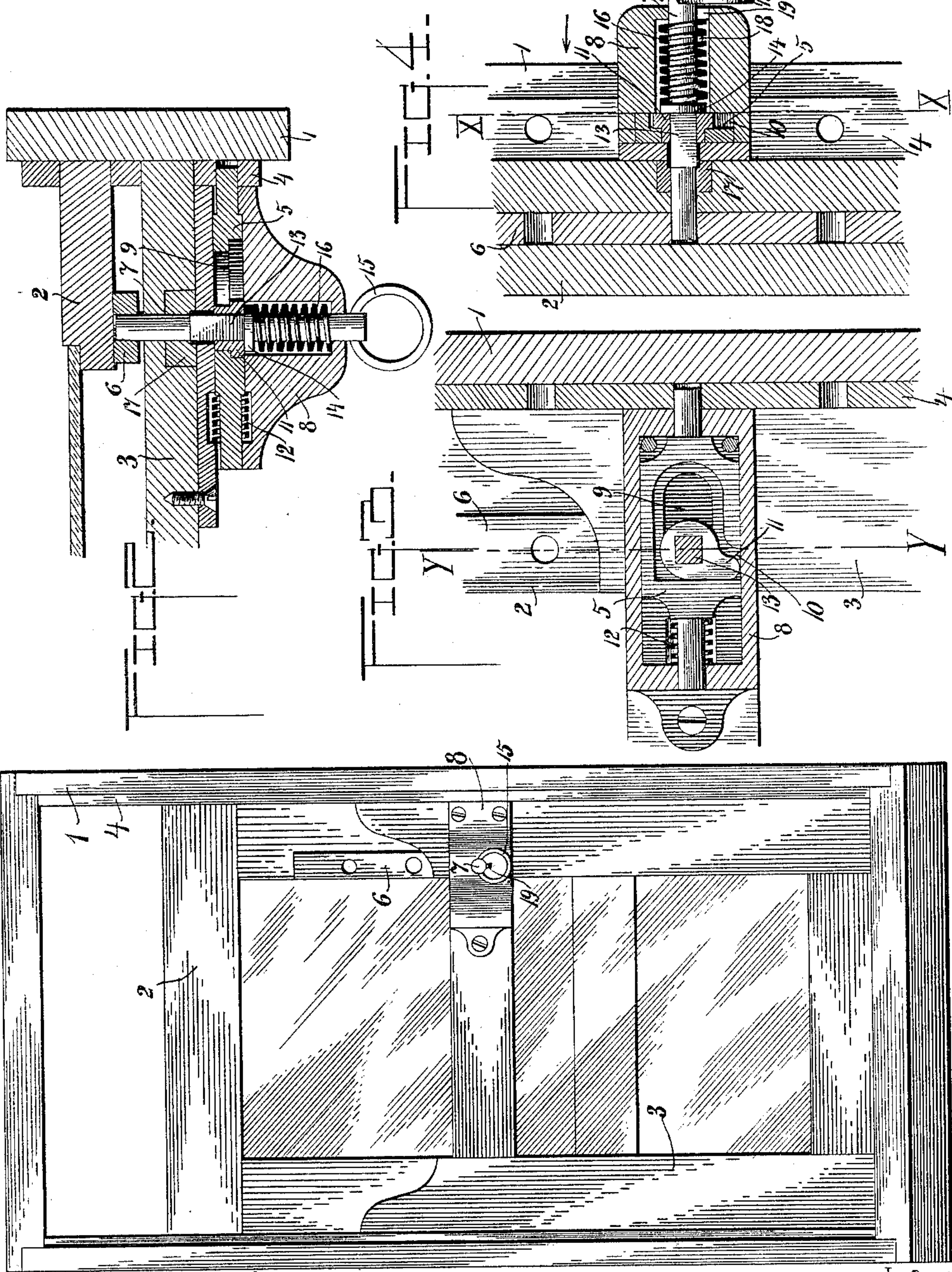


(No Model.)

H. TOOPS.
SASH FASTENER.

No. 592,457.

Patented Oct. 26, 1897.



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SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 592,457, dated October 26, 1897.

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To all whom it may concern:

Be it known that I, HECTOR TOOPS, a citizen of the United States, residing at Frankfort, in the county of Clinton and State of Indiana, have invented a new and useful Sash-Fastener, of which the following is a specification.

This invention has relation to that class of devices which are applied to the sliding sashes of windows for holding them in any required relation to secure ventilation. This class of devices admits of the top sash being lowered or the bottom sash raised, or both being moved, and at the same time locking the sashes to the window frame or casement in the relative adjusted position, whether open or closed.

One of the vital features of the invention is the construction of a fastener which can be applied to either side of a sash, so as to be used on the right-hand or the left-hand stile, and which will be hidden from view from the outside and not adapted to be easily pried off or tampered with by persons seeking to effect an entrance through a window having the invention applied thereto, and which can be attached to the inner face or side of the lower sash and will operate through the said sash and engage with and lock the upper sash in any desired position.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a front view of a window as seen from the inner side, showing the invention applied. Fig. 2 is a horizontal section showing the parts on a larger scale. Fig. 3 is a longitudinal section of the fastener about on the line X X of Fig. 4, looking in the direction of the arrow. Fig. 4 is a section on the line Y Y of Fig. 3, looking to the left.

Corresponding and like parts are referred to in the following description and indicated

in the several views of the drawings by the same reference-characters.

The window frame or casement 1 receives the sliding sashes 2 and 3, which are held in place by window-stops in the ordinary manner. One of the stops 4 has a series of openings at intervals in its length to receive an operating end of the locking-bolt 5, or this stop may be replaced by a strip of metal or wood having openings for a like purpose. A strip 6 is secured to the inner face or side of a stile of the top sash and has openings at intervals in its length to receive the operating end of a pin or stem 7, which is disposed at right angles to the locking-bolt 5. In the absence of the strip 6 the openings to receive the engaging end of the pin or stem 7 may be formed directly in the side stile of the top sash.

The fastener consists of a case 8, of suitable design and size to receive the operating parts, and is adapted to be secured to the inner face or side of the bottom sash in the plane of the meeting-rail, and inasmuch as the locking-bolt is double ended and operates alike, whether applied to the right-hand or the left-hand stile of a sash, it can be applied to either side of the sash, as required. The locking-bolt 5 has its middle portion widened and provided with an oblong opening 9, which is straight at one end and made rounding at the opposite end, and the inner side is recessed and formed with a notch 10, the latter receiving the terminal of an operating-cam 11, by means of which the locking-bolt is reciprocated. The terminals of the locking-bolt operate through openings in the ends of the case, so as to be projected from either end, according to the relative position of the fastener. A spring 12 is mounted upon an end portion of the locking-bolt and is confined between the shoulder formed at the base thereof and the adjacent end of the case, and serves to hold the locking-bolt projected or in a normal position.

The pin or stem 7 is formed with an angular portion 13, intermediate of its ends, and a shoulder 14, and operates through openings formed in the sides of the case and at right angles to the plane of the locking-bolt 5. The outer end of the pin or stem is supplied with

a ring 15, the latter serving as a means for turning the pin or stem and withdrawing it from engagement with the top sash. A spring 16 is mounted upon the outer portion of the pin or stem between the shoulder 14 and the outer side of the case, and its purpose is to withdraw the pin and force it into engagement with the top sash, so as to secure it at the required position. This pin or stem is of a length to operate through an opening formed transversely in the meeting-rail or upper portion of the side stile of the lower sash, so as to engage with the top sash or the strip 6 applied thereto. The opening in the sash through which the pin or stem operate is reinforced by means of a collar 17, driven into the said opening and retained in place by frictional engagement or in any of the usual ways commonly adopted in the art.

The operating-cam 11 has its hub portion formed with an angular opening to receive the angular part 13 of the pin or stem and operates in the inner recessed side of the locking-bolt, and its terminal portion enters the notch 10 and engages with the walls thereof, so as to reciprocate the bolt upon turning the stem or pin to the right or left. The stem or pin is slidingly mounted with respect to the cam to enable its inner end to be withdrawn from engagement with the top sash, and the angular portion 13 thereof is of such length as to engage with the angular opening in the hub of the cam, whereby the latter can be moved to operate the locking-bolt, whether the pin or stem is projected or withdrawn or at any intermediate position. A nib 18 is provided on one side of the outer portion of the pin or stem, and is adapted to operate in a groove 19 in a side of the opening in the case through which the stem or pin operates, whereby the said pin or stem can be withdrawn from engagement with the top sash when the locking-bolt is disengaged from the window frame or casing, thereby admitting of either the top or the bottom sash being moved separately or together, and upon releasing the pin or stem it will lock the two sashes at the required position, after which the pin or stem may be turned to throw the locking-bolt into engagement with the window frame or casement, thereby locking the sashes thereto in the required position. By applying the lock to the inner side of the sash the upper ends of the side stiles may project above the meeting-rail and have any desired finish, and the fastener is concealed from view from the outside and is not readily accessible to be pried off or released by any one seeking ingress by means of the window, and, moreover, the device can be applied to either side of the sash, as desired or made necessary under certain conditions.

Having thus described the invention, what is claimed as new is—

1. In a window, the combination with the frame or casement and sliding sashes, of a

fastener secured to the inner side of the lower sash and comprising a locking-bolt to engage with one of a series of openings provided at one side of the frame or casement, an operating-cam for operating the locking-bolt, and a pin or stem slidably mounted within the said cam and adapted to operate it and the locking-bolt at any position within the range of its movement, and located at right angles to the locking-bolt and operating in an opening of the lower sash, and adapted to engage with one of a series of openings provided on the top sash to secure the sashes at any relative adjusted position, substantially as set forth.

2. In a window, the combination with the frame or casement and sliding sashes mounted therein, of a locking-bolt having an oblong opening and a recess and notch in one side, the notch communicating with the recess and located to one side of the oblong opening, an operating-cam located in the recessed side of the locking-bolt and having its terminal end entering the said notch, and a pin or stem slidingly mounted in the hub portion of the said cam and passing through the oblong opening of the locking-bolt and adapted to operate the latter at any position within the range of its movement, the said pin or stem serving to lock the two sashes in an adjusted position, and the locking-bolt fixing the position of the sashes with respect to the window-frame by entering one of a series of openings provided therein, substantially as set forth.

3. In a combined sash fastener and lock, the combination of a case having a transverse opening and a groove at one side of the said opening, a locking-bolt, an operating-cam, and a stem operating at right angles to the locking-bolt and working through the said cam, and adapted to operate the latter and the locking-bolt at any stage of its movement, and provided at one side with a nib to pass through the groove of the transverse opening in which is mounted the said stem, substantially as and for the purpose set forth.

4. A sash-fastener consisting of a case having a transverse opening and a groove at one side of the opening, a double-ended locking-bolt mounted to reciprocate in the case and adapted to have its ends operate through openings in the ends of the case, a spring mounted upon an end portion of the locking-bolt and confined between the shoulder at the base thereof and the adjacent end of the case, an operating-cam, and a spring-actuated stem mounted to move longitudinally in the said cam and the transverse opening of the case and having a nib at one side to pass through the aforesaid groove and adapted to move the cam and bolt at any position, substantially as set forth for the purpose specified.

5. The herein-described sash-fastener, consisting of a case having a transverse opening and a groove at one side of the opening, a double-ended locking-bolt having an oblong

opening and a recess and notch in one side,
a spring for holding the locking-bolt in a nor-
mal position, an operating-cam located in the
recessed side of the locking-bolt and having
5 its terminal end operating in the said notch,
a stem working through the case and having
an angular portion slidingly mounted in a cor-
responding opening in the cam, a shoulder
and a nib, the latter adapted to move through
10 the aforesaid groove, a spring mounted upon
the stem and confined between the shoulder
and the case, and a ring or finger-grip applied

to the outer end of the stem, the stem being
adapted to operate the cam and bolt at any
position within the range of its movement, 15
substantially as set forth for the purpose de-
scribed.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

HECTOR TOOPS.

Witnesses:

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