G. TAKACS.

SASH LOCK.

APPLICATION FILED JULY 19, 1913.

1,141,286. Patented June 1, 1915.

Fig. 1.

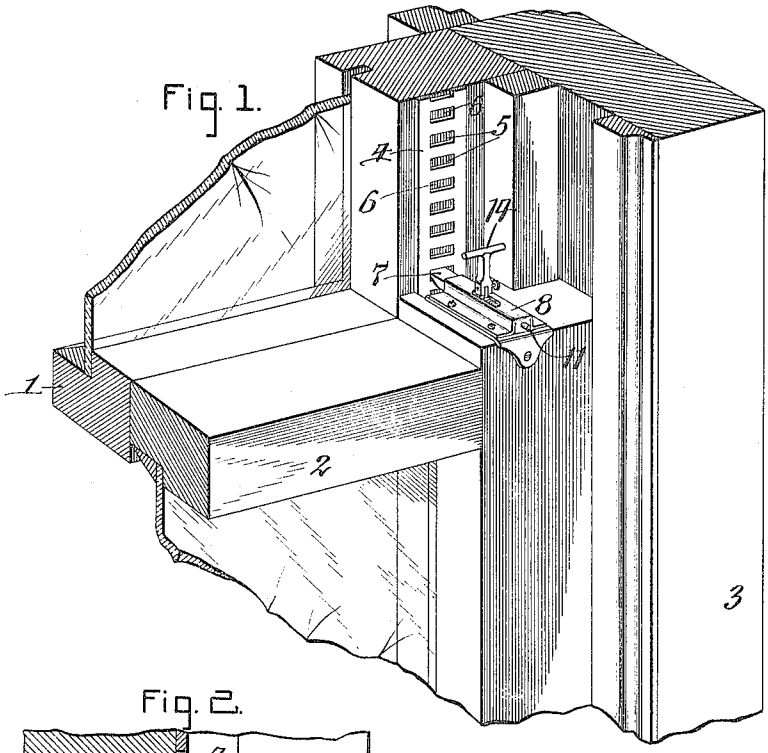


Fig. 2.

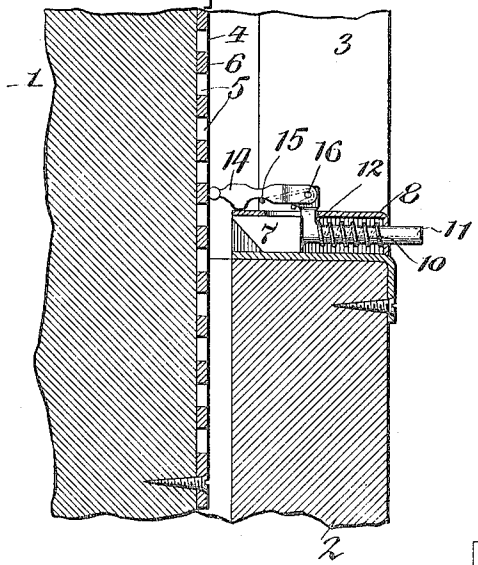


Fig. 3.

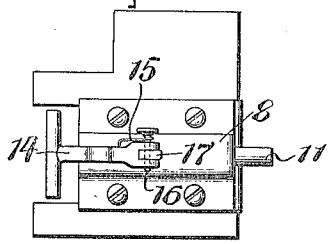


Fig. 4.

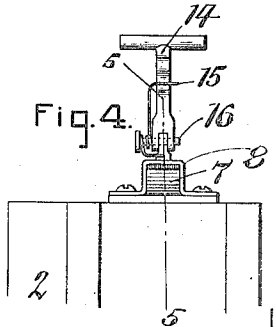
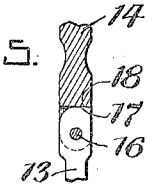


Fig. 5.



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UNITED STATES PATENT OFFICE.

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SASH-LOCK.

1,141,286. Specification of Letters Patent. Patented June 1, 1915.

Application filed July 19, 1913. Serial No. 780,006.

To all whom it may concern:

Be it known that I, GEORGE TAKACS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Sash-Locks, of which the following is a specification.

This invention has for its object the production of a sash lock for windows which can be set so as to lock the relatively movable members of a window in a more or less open position against being further opened and which is so constructed that the windows may be left unlocked in an open position but will become automatically locked the instant one of the movable members of the window is moved relatively to the other in a direction tending to close either one of the other of the window members.

In the accompanying drawings: Figure 1 is a sectional perspective view of a window having its sashes or movable members equipped with my improved sash lock. Fig. 2 is a vertical transverse section thereof. Fig. 3 is a top plan view of a part of the lock. Fig. 4 is a front elevation of the same. Fig. 5 is a vertical transverse section taken in line 5—5, Fig. 4.

Similar characters of reference indicate corresponding parts throughout the several views.

Although my improved sash lock may be applied to windows which may vary as to details of construction the same is shown in the drawings in connection with a window having upper and lower sashes 1, 2 which are guided to move vertically in runways or channels in the window frame 3.

One of the movable members of the window, preferably the upper sash 1 is provided on the inner side of one of its upright bars or stiles with a locking rack 4 which is preferably constructed of a piece of metal provided with a vertical row of openings 5 forming a vertical row of shoulders or abutments 6 which alternate with these openings.

Upon the other movable member of the window consisting of the lower or inner sash 2 is arranged a horizontally and transversely movable locking bolt 7 the outer or front end of which is adapted to be engaged with one or the other of the teeth of the locking rack. This end of the locking bolt is provided with a horizontal or abrupt upper side and a beveled or inclined underside so that when this bolt is in engagement with the locking rack the upper sash is prevented from being opened or moved downwardly relatively to the lower sash and the lower sash is prevented from being opened or moved upwardly relatively to the upper sash, but both sashes are permitted to move freely apart or away from each other into their closed positions.

This locking bolt may be guided in any suitable manner but preferably in a guideway or casing 8 which is secured to the upper side of the lower sash adjacent to one of its vertical edges thereof and the same is yieldingly moved in a direction which will engage its front end with the locking rack by means of a spring 10 surrounding a shank 11 projecting inwardly from the rear end of the locking bolt through an opening in the guide casing and bearing with its inner end against the guide casing while its outer end bears against the shoulder 12 on said shank.

Adjacent to the inner end of the locking bolt its shank is provided with an upwardly projecting lug 13. To this lug is pivoted for vertical rotation a trip lever 14 which is adapted to engage its outer free end with the locking rack. When the trip lever is free the same is yieldingly held in an upright position by means of a spring 15 surrounding the pivot pin 16 which connects the trip lever and the lug 13 and bears with its opposite ends against this lever and lug, respectively. The upward and inward turning movement of the trip lever under the action of the spring 15 is arrested when the trip lever reaches an upright position, this being preferably effected by means of a stop shoulder or heel 17 formed on the upper end of the pivot lug 13 and engaging with a corresponding shoulder 18 on the trip lever.

When it is desired to lock the two sashes

of the window in a more or less open position relatively to each other the locking bolt is withdrawn from the locking rack and then reëngaged therewith after one or both sashes have been moved to the desired open position after which further opening of the sashes is prevented by engaging the abrupt side of the end of the locking bolt with the respective tooth of the locking rack.

While thus moving the sashes one relatively to the other the locking bolt may be retained in a retracted or inoperative position without holding the same manually this being effected by pushing the trip lever outwardly and downwardly so that it stands in a horizontal position and engages its outer end with the face of the locking rack and its underside with the top of the casing 8. The parts of the lock are so proportioned that when the trip lever is thus engaged with the locking rack the outer or front end of the locking bolt will be withdrawn from the locking rack and held in this position, as shown in Fig. 2.

By thus setting the lock so that the bolt is held in its retracted position by engaging the trip lever with the rack both hands of a person may be employed for raising the lower sash which is very desirable in the case of heavy sash or sashes which tend to stick. Furthermore, by first setting the lock in its released position while the sash is in its lowered position, this sash may be raised to a position which would bring the lock beyond the reach of the operator. In either case, after the lower sash has been raised as far as desired, a slight downward movement of the lower sash causes the trip lever to be turned upward slightly and released from the rack so that the spring 15 can complete this movement and permit the spring 10 to push the locking bolt forwardly into engagement with the rack for preventing further upward opening movement of the lower sash.

If any attempt should be made to move either one of the sashes up or down while the trip lever thus engages with the locking rack this movement tends to release the trip lever which is only held by the pressure of the spring 10 in frictional engagement with the locking rack, and when thus released the spring 15 instantly operates to swing the trip lever from its horizontal operative position, shown in Fig. 2, to its upright or inoperative position, as shown in Figs. 1 and 4, thereby permitting the main spring 10 to push the locking bolt forwardly or outwardly into engagement with the locking rack and thereby prevent opening of either one or the other of the sashes if this should be attempted. Closing of the sashes can, however, be effected without hindrance inasmuch as during such movement the locking rack merely trips past the beveled surface of the front end of the locking bolt.

It will thus be seen that when this locking bolt is held in its retracted position by means of the trip lever which frictionally engages the locking rack that the locking device at this time is delicately poised and that a very slight release of the frictional contact between this lever and the locking rack, such as occurs when tampering with the window from the outer side of the building, would operate to release the trip lever and thereby operate to automatically lock the sashes against further movement in a direction which would open the same. If therefore when opening the window moderately the locking bolt has not been engaged with the rack but has been, through oversight, left in a retracted position by engagement of the trip lever with the rack, a slight downward movement of the lower sash or a slight upward movement of the upper sash will liberate the locking bolt and permit the same to engage into the rack.

This sash lock is very simple and inexpensive in construction and can be readily applied to the sashes of windows as now commonly made without requiring any alteration of the same.

Furthermore, this sash lock can be very easily operated, the same is very neat in appearance and it forms an effective safe guard against entrance into the building through the window by unauthorized persons.

I claim as my invention:

1. A lock for windows having members which are relatively movable comprising a rack arranged on one of said members, a locking bolt mounted on the other member and adapted to engage said rack, a trip lever connected with said bolt and adapted to engage a part on the window member which carries said rack for holding said bolt out of engagement from said rack and means operating to press said bolt yieldingly toward said rack.

2. A lock for windows having upper and lower movable sashes, a rack secured to the upper sash, a locking bolt adapted to engage said rack, a casing which is mounted on the lower sash and in which the locking bolt is guided, a spring interposed between said casing and bolt and operating to hold the latter yieldingly in engagement with said rack, a trip lever pivoted on said bolt and adapted to engage said rack, and a spring adapted to move said lever away from said rack.

3. A lock for windows having upper and lower movable sashes, a rack secured to the upper sash, a locking bolt adapted to engage

said rack, a casing which is mounted on the lower sash and in which the locking bolt is guided, a spring interposed between said casing and bolt and operating to hold the latter yieldingly in engagement with said rack, a trip lever pivoted on said bolt and adapted to engage said rack, a spring adapted to move said lever away from said rack and a stop device for limiting the movement of said trip lever away from said rack.

Witness my hand this 17th day of July, 1913.

GEORGE TAKACS.

Witnesses:
IGNATZ ZIMMLE,
PETER BERMEL.