April 19, 1932. E. J. DOUCETTE 1,854,646

WINDOW SASH LOCK

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Fig. 1.

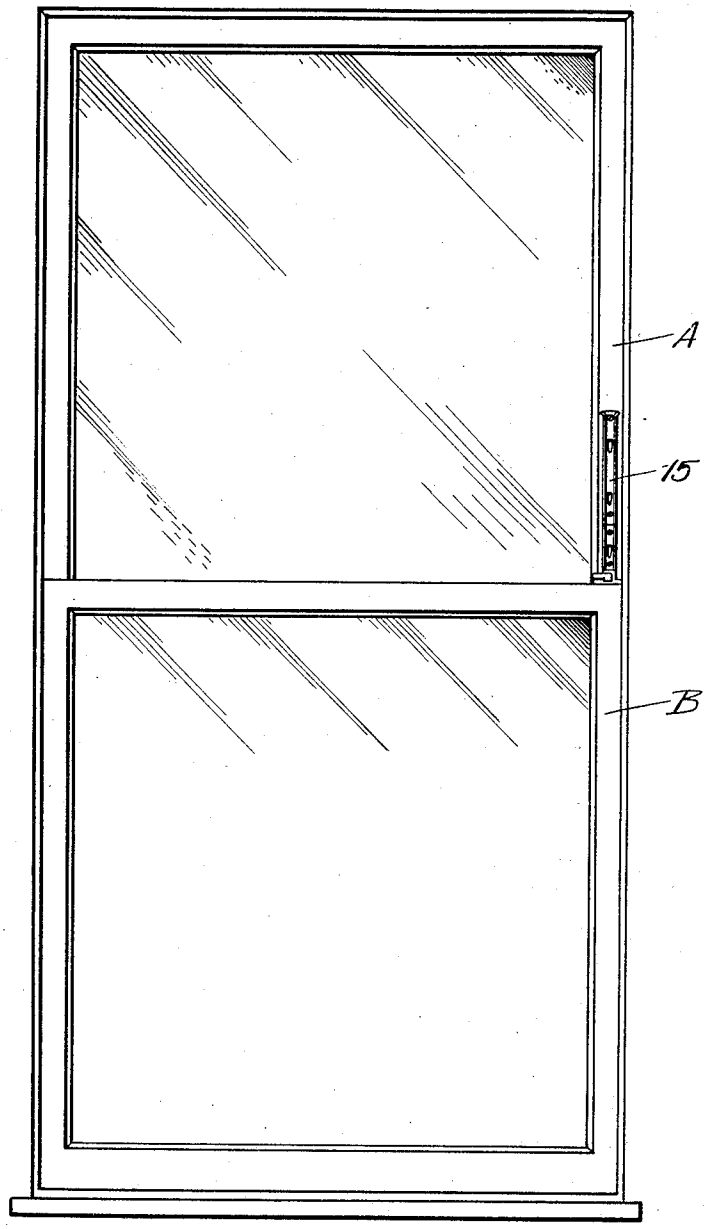

Fig. 2.

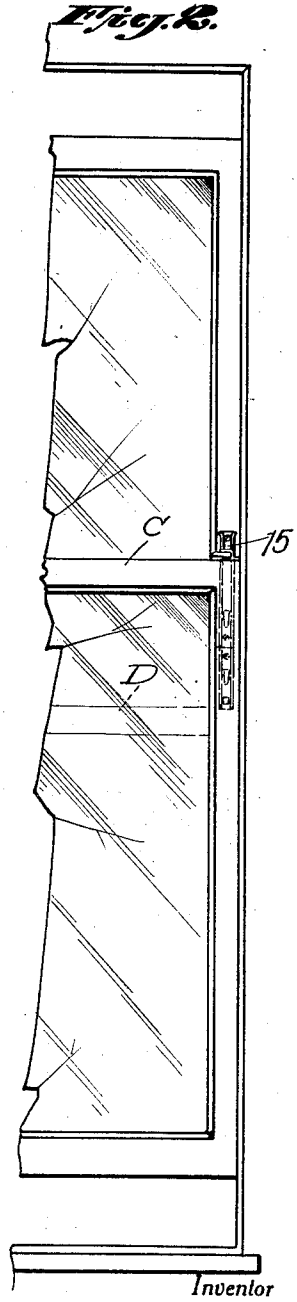

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Fig. 5.

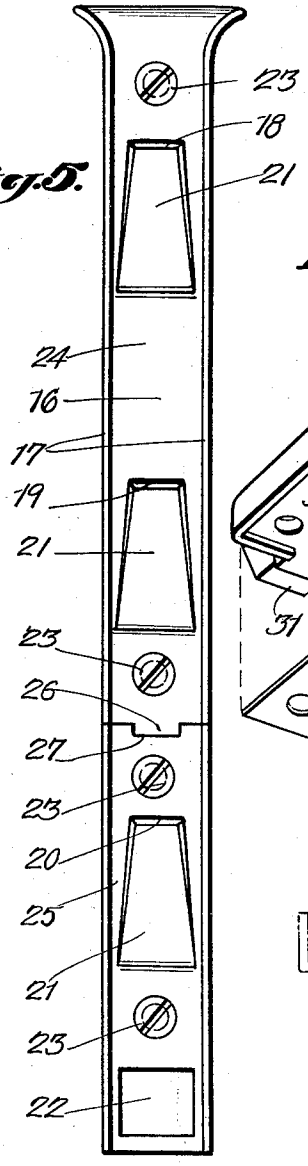

Fig. 4.

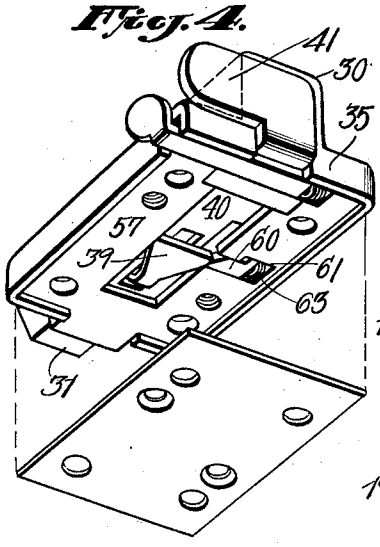

Fig. 3

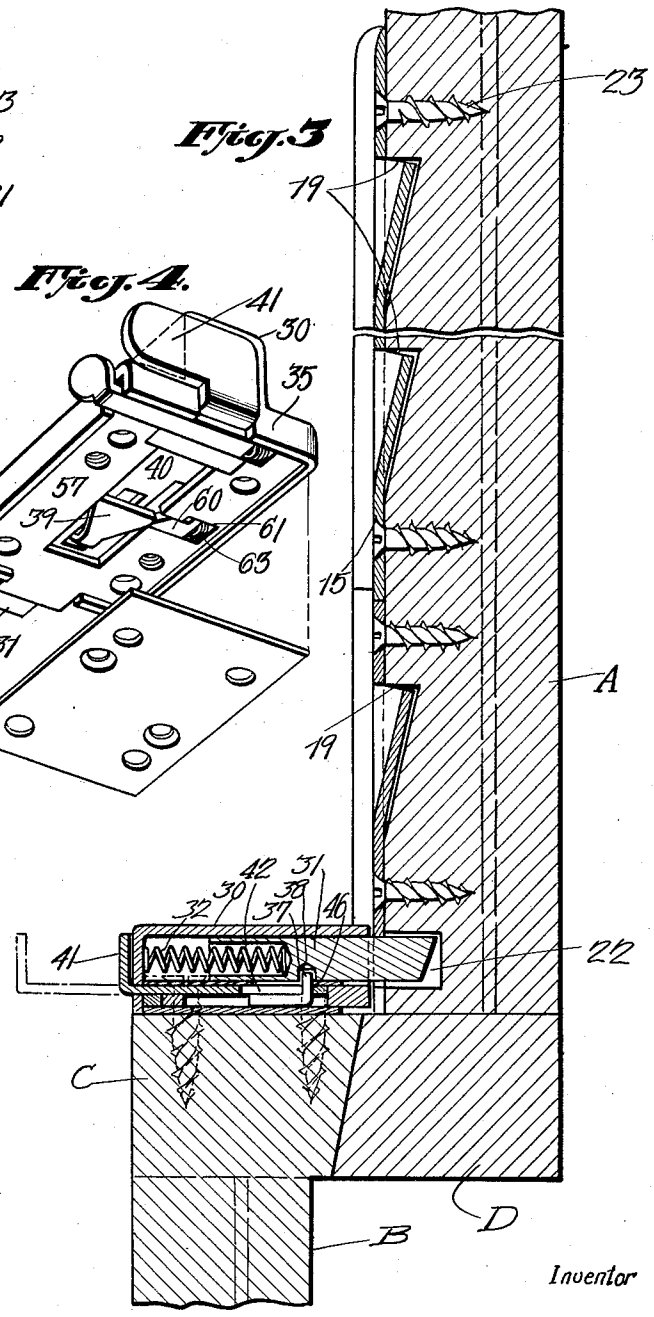

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Fig. 9.

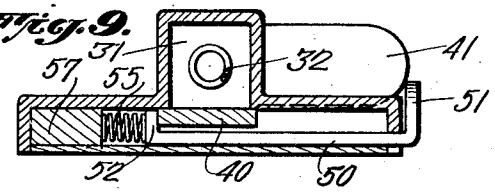


Fig. 11.

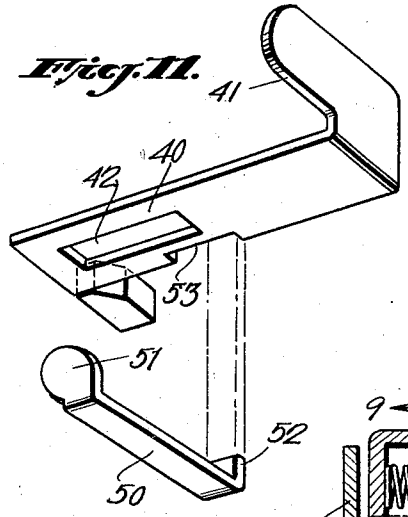


Fig. 8.

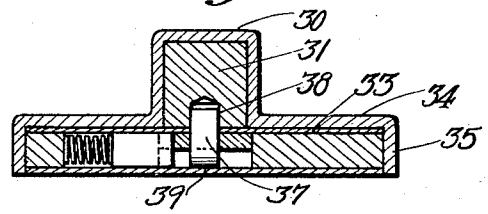


Fig. 7.

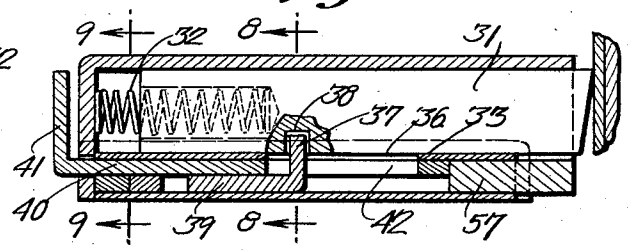


Fig. 10.

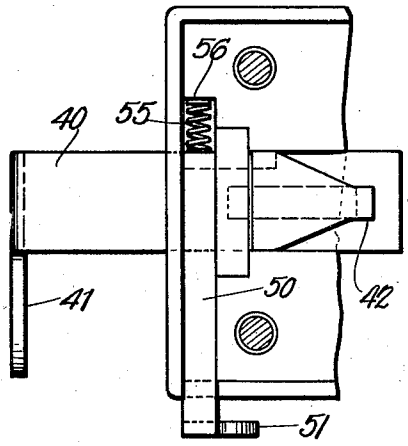
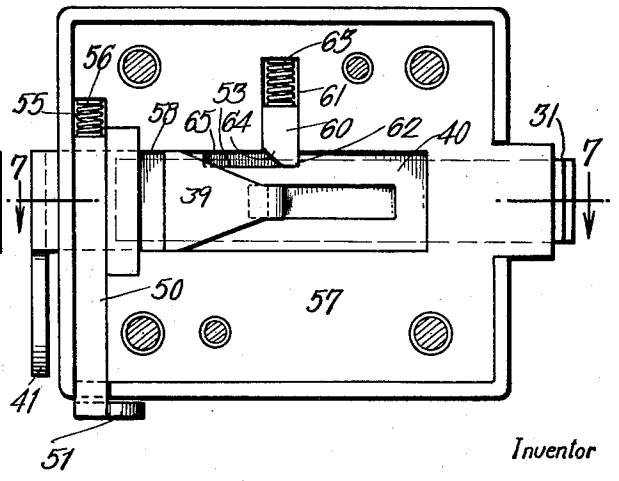


Fig. 6.



Inventor

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By Clarence A. O'Brien

Patented Apr. 19, 1932 1,854,646

UNITED STATES PATENT OFFICE

EDMUND JAMES DOUCETTE, OF BROOKLYN, NEW YORK

WINDOW SASH LOCK

Application filed September 12, 1930. Serial No. 481,486.

This invention relates to improvements in devices for locking windows, and more particularly it pertains to devices especially for locking windows of the sliding sash type.

It is an object of the present invention to provide a novel device of the character described in which a window sash may be securely locked in a partially open position.

It is a further object of the invention to provide a novel device of the character described in which, after a window sash has been adjusted to a partially open position, it can be moved only in the direction of the closed position.

It is a further object of the present invention, so to construct a sash lock that when the window sash equipped therewith is once adjusted to a partially open position, the window sash lock cannot be released to permit further movement of the sash in the opening direction until after the window sash has been moved to the completely closed position in which latter position it will be automatically locked except from the inside of the window.

With the above and other objects in view, reference will be had to the accompanying drawings, wherein

Figure 1 is a view in front elevation showing a window equipped with a sash lock constructed in accordance with the present invention,

Figure 2 is a similar view partly broken away, the window sash being shown in their opened or partially opened position,

Figure 3 is a detail longitudinal sectional view on an enlarged scale taken through the meeting rails of the window sash,

Figure 4 is a bottom perspective view of, the elements of a sash lock constructed in accordance with the present invention,

Figure 5 is a view in elevation of a rack member which constitutes the other member of the sash lock,

Figure 6 is an enlarged bottom plan view showing the parts of the sash lock in one position,

Figure 7 is a longitudinal sectional view taken on the line 7—7 of Figure 6,

Figure 8 is a transverse sectional view taken on the line 8—8 of Figure 7,

Figure 9 is a transverse sectional view taken on the line 9—9 of Figure 10,

Figure 10 is a detail fragmentary view showing the several parts of the sash fastener in another of their operative positions, and;

Figure 11 is a detail perspective view showing means for locking the bolt of the sash lock against operation.

Referring specifically to the drawings, B designates the lower sash and A designates the upper sash of a window, and C and D, represent respectively the meeting rails of the lower and upper sash.

Referring to Figure 3, it will be noted that the upper sash A carries a rack member 15 on the front face of one of the side rails thereof, the rack member being preferably located in the lower right hand corner of the upper sash.

This rack member is illustrated in Figure 5, and it will be noted that it comprises a channel like member 16 having side walls 17. The base of the channel member 16 is provided with a plurality of shoulders 18, 19 and 20 which may be formed by cutting the base of the channel member and pressing rearwardly thereof portions such as 21. In its lower end, the channel member is provided with a square opening 22, and by reference to Figure 3 it will be noted that this opening 22 is deeper than the shoulder 19 and this construction is for a purpose to be hereinafter described. The rack member 15 is preferably secured to the upper sash by means of screws or the like 23, and in its preferred form, said rack member comprises two sections 24 and 25 which are attached together by means of a projection or the like 26 on the member 24 which fits into a recess 27 upon the adjacent end of the member 25 as more clearly shown in Figure 5.

The other member of the sash lock, comprises a housing 30 preferably of rectangular form, and mounted in said housing 30 there is a sliding bolt 31 pressed forwardly by means of a coil spring 32 so that said bolt resiliently engages the shoulders 19 as the

upper sash A is raised to the desired position. The bolt 31 is slidably mounted upon a plate 33, and the housing 30 in which the bolt 31 slides is a portion of the main housing 34 of this member of the sash lock, and in the uppermost portion or against the top wall thereof, the plate 33 is retained in a manner to be hereinafter described. The main housing 34 is provided with side and end flanges such as 35, and this housing forms the means for enclosing the operating means of the bolt 31 which will now be described.

The plate 33 is provided with a slot 36, and projecting through said slot 36 there is a tongue 37 which engages in a notch 38 in the bolt 31. The tongue 37 is a right angular projection from a substantially triangularly shaped plate 39. This member 39 is slidably mounted with respect to an operating member 40 which latter has a finger piece 41 by means of which it may be reciprocated within the housing 34.

This operating member 40, is provided with a slot 42 and the right angular projection 37 of the member 39 projects through said slot. By this construction and arrangement of parts, it will be obvious that as illustrated in Figure 7, the sliding bolt 31 is free to move independently of the operating member 40 for example, during movement of the upper sash A from an open to a closed position, thus allowing the sliding bolt 31 to move freely over the rack member 15 in the direction of movement of the upper sash to the closed position. This action is illustrated in Figure 7 by reference to which it will be noted that the bolt 31 is retracted, without movement of the operating member 40.

By reference to Figure 3, it will be noted that when it is desired to retract the bolt 31, the finger piece 41 of the operating member 40 is moved to the dotted line position. Movement of this operating member 40 causes the forward end wall 46 of the slot 42 to engage the projection 37 of the member 39, and by reason of the engagement of the end of the projection 37 in the notch 38, the bolt 31 will be retracted to a point where it will disengage the rack member 15, and thus permit relative movement of the sash members.

From the foregoing it will be apparent that the sliding bolt 31 is free to move relative to the operating member 40, and at the same time is capable of operation thereby as described.

Means is provided to retain the bolt 31 in its fully retracted position, and in the present illustration of the invention, this means consists of a sliding pawl or dog 50 having a finger piece or operating member 51, and a right angular projection 52 on its end opposite to that which carries the operating member or finger piece 51. As best illustrated in Figure 11, this right angular projection is adapted to be received within a notch 53 formed within one of the side edges of the operating member 40 when the operating member is withdrawn to its full bolt retracting position, and as best illustrated in Figures 6 and 10, this dog or pawl 50 is forced into engagement with the notch 53 by means of a coil spring or the like 55 mounted in a recess 56 in a plate 57 which is cut out as at 58 to form a guide for the operating member 40. Thus it will be seen that as the operating member is withdrawn to its position in which it fully retracts the sliding bolt 31, the spring 55 will force the pawl or dog into engagement with the notch 53 and retain the operating member and the sliding bolt in their fully retracted positions until the dog or pawl is released with respect to the operating member 40 which is done by exerting slight pressure upon the finger piece or operating member 51 of said dog or pawl.

Means is provided to prevent complete release of the sliding bolt 31 with relation to the rack member 15 from the inside of the window, when the window sash are in partially opened position, and this means comprises a spring pressed pawl or dog 60 mounted in a recess 61 in the plate 57, and forced into engagement with the forward wall 62 of the notch 53 in the operating member 40 by means of a coil spring 63. This pawl or dog has an angular face 64 which is adapted for engagement by the angular face 65 of the member 39 in order to force the pawl rearwardly of the recess 61 against the spring 63 to permit of free sliding movement of the operating member 40.

This portion of the mechanism operates in the following manner:

As best illustrated in Figure 4, when the sliding bolt 31 is completely extended, the angular face 65 of the member 39 engages the pawl or dog 60 and forces it rearwardly of the recess 61. The outer end of this dog or pawl is then clear of the side edge of the operating member 40 and reciprocating movement of the operating member 40 may be had if the same is operated by its finger piece or operating member 41. This is true, since the operating member 40 is free to slide by the pawl 60 when the operating member is operated by its operating member or finger piece 41. When, however, the bolt is only partially retracted as is the case when it is sliding by the shoulders 19 of the rack member 15, the member 39 is moved rearwardly as illustrated in Figure 6, and the pawl 60 engages the shoulder 62 of the operating member 40, and prevents operation of the operating member 40 and consequent operation of the sliding bolt 31. To release the pawl 60, it is necessary to completely close the window sash to allow the sliding bolt 31 to engage in the recess 22 which as heretofore

stated is deeper than the shoulders 19 and permits full forward movement of the bolt 31. This full forward movement of the bolt 31, moves the angular face 65 of the member 39 into engagement with the angular face 64 of the dog or pawl 60 and fully retracts the same into the recess 61 thus leaving the bolt 31 free for complete retracted movement by the operating member 40 as heretofore described.

From the foregoing description, it will be apparent that the present invention provides a new and novel window sash lock in which the sash may be adjusted to a partially open position, and in which the sash will be retained against operation either from the inside or the outside to a full open position until the sash have been first completely closed, thus preventing movement of the sash to a position where a person could enter the window from the outside.

While the invention has been herein illustrated in what may be termed a perferred form, it is to be understood that the invention is not to be limited to the specific construction herein shown, and that it may be practiced in other forms without departing from the spirit of the invention.

Having thus described the invention, what I claim as new and desire to secure by U. S. Letters Patent, is:

1. A window sash lock, comprising a sliding bolt, operating means therefor, means for permitting operation of said sliding bolt indepenently of its operating means, means for preventing operation of said sliding bolt by its operating means, and means for locking the bolt operating means against operation.

2. A window sash lock, comprising a sliding bolt, operating means therefor, means for permitting operation of said sliding bolt independently of its operating means, means for preventing operation of said sliding bolt by its operating means after initial operation of the bolt, and means for locking the bolt operating means against operation after an initial operation thereof.

In testimony whereof I affix my signature.

EDMUND JAMES DOUCETTE.