

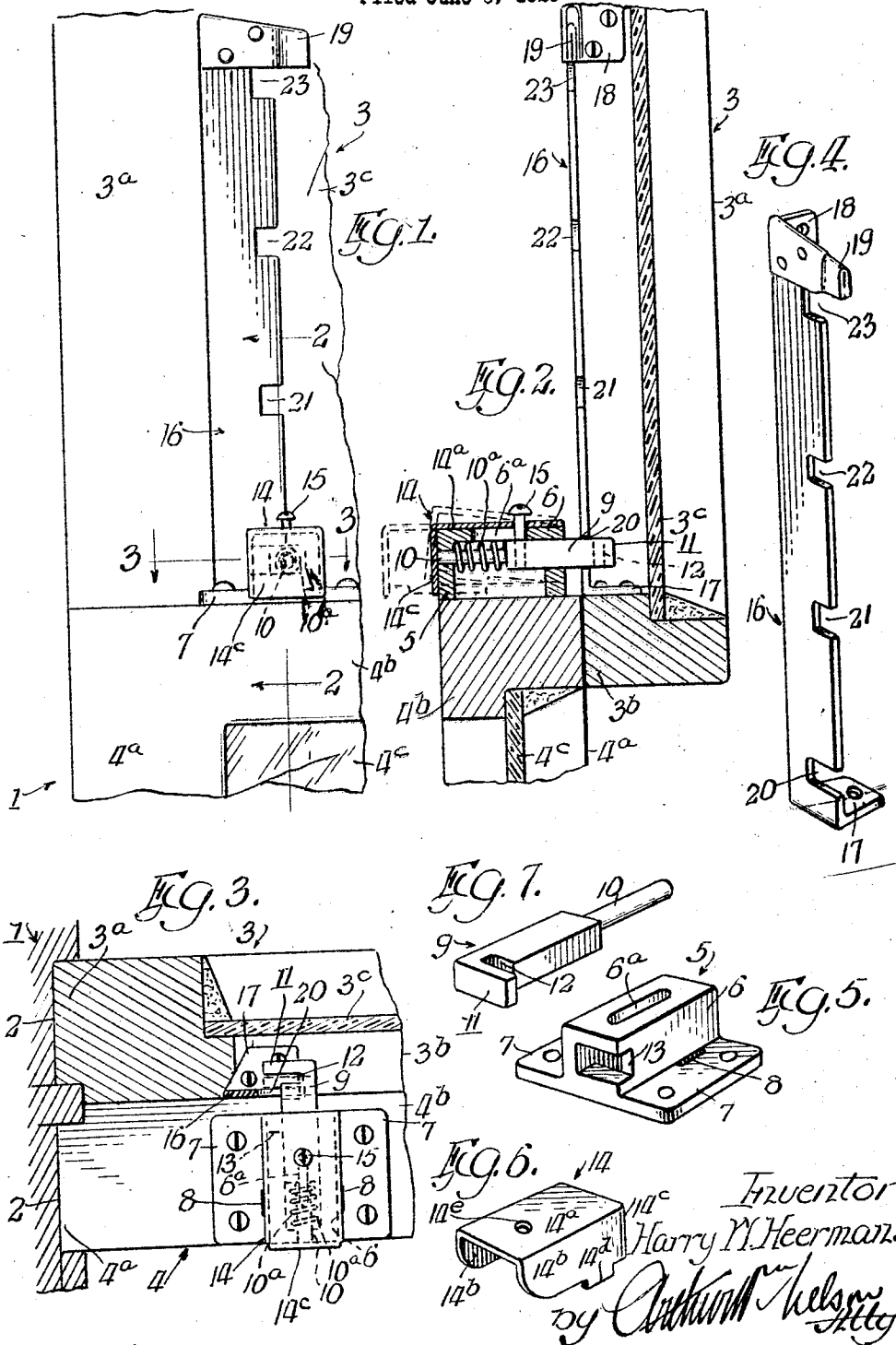
Sept. 8, 1925.

1,552,560

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SASH LOCK FOR WINDOWS

Filed June 8, 1925



Patented Sept. 8, 1925.

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UNITED STATES PATENT OFFICE.

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SASH LOCK FOR WINDOWS.

Application filed June 8, 1925. Serial No. 35,553.

To all whom it may concern:

Be it known that I, HARRY W. HEERMANS, a citizen of the United States and a resident of Kenosha, county of Kenosha, and State of Wisconsin, have invented certain new and useful Improvements in Sash Locks for Windows, of which the following is a specification.

This invention relates to improvements in sash locks for windows and it consists in the matters hereinafter described and more particularly pointed out in the appended claims.

The primary object of the invention is to provide a simple and efficient device adapted to be attached to associated window sash whereby they may be securely locked in a fully closed position or in any one of a number of part way open positions for ventilation, the parts thereof being so arranged as to foil any attempt to manipulate them from outside the window even though one of the sash is in a part way open position.

A further object of the invention is to provide a device of the kind which may be made and sold for a substantially low price and which may be readily applied to the sash by inexperienced persons.

These objects of the invention as well as others, together with the many advantages thereof will more fully appear as I proceed with my specification.

In the drawings:—

Fig. 1 is a view in elevation of portions of a window frame and associated sashes with the parts forming my improved lock in position thereon.

Fig. 2 is a vertical section through the same as taken on the line 2—2 of Fig. 1.

Fig. 3 is a horizontal sectional view as taken on the line 3—3 of Fig. 1.

Figs. 4, 5, 6 and 7 are detail perspective views of parts embodied in one form of my improved sash lock.

Referring now in detail to that embodiment of the invention illustrated in the accompanying drawings 1 indicates one of the side members of a window frame having the usual grooves 2—2 therein and in which the outer marginal portions of the stiles 3^a and 4^a, respectively of the top and bottom sash 3 and 4 have sliding guiding bearing in the manner well known. Said sash each include the usual meeting rails 3^b and 4^b and sash panes 3^c and 4^c as shown.

My improved construction includes a

locking bolt casing 5 (see Fig. 5) which is secured to the top surface of the meeting rail of the bottom sash near the stile thereof. Said casing is in the form of a block like hollow body 6 which extends transversely of said meeting rail and has side flanges 7—7 by means of which it is attached to said rail as by the screws as shown. In each side flange near the rear end of the block like body is a recess 8.

In the body of the casing is slidably mounted a locking bolt 9 (see Fig. 7). The front end of said bolt is rectangular in cross section and has sliding bearing within the casing body and the rear end is in the form of a cylindrical extension 10 which has sliding bearing in the rear end of said casing body. A helical coil expansion spring 10^a surrounds said extension in a manner normally urging said bolt forwardly or outwardly of the block like body into its fully extended position. The extreme forward end of said bolt has a lateral extension 11 and to the rear of said extension is a laterally opening recess or notch 12. In the front end of that side wall of the casing body associated with the extension 11 of the bolt is provided a recess 13 into which the said extension may enter when the bolt is in its fully retracted position.

Associated with said casing body not only for manipulating the locking bolt but also for locking it in either its fully extended or retracted position is a cap or cover member 14 (see Fig. 6). This cap or cover fits upon the block like body 6 and is intended to be moved longitudinally thereof and includes a top wall 14^a, side walls 14^b and a rear end wall 14^c, the side walls having depending lugs 14^d adapted to be engaged in the recesses 8 of the bolt casing 5. In the top wall of the cover is provided a hole 14^e through which a headed pin or screw 15 loosely extends and passes through a longitudinal slot 6^a in the top wall of the casing body and is fixed to the rectangular front end part of the locking bolt 9. When the locking bolt is in its normally extended position, the cover so engages the casing body as to entirely enclose the same. To retract the bolt, the rear end of the cover is lifted upwardly, tilting about its forward end to withdraw the studs 14^d from the recesses 8, there being sufficient play provided between the top wall of said cover and the headed end of the pin or screw 15 to permit this

movement. After the cover has been thus tilted it is withdrawn rearwardly and through the pin or screw 15 a like movement is, of course, imparted to the locking bolt 9 against the action of its spring 10^a when a downward tilting movement is imparted to the rear end of the cover so that the front ends of its lugs 14^a will engage or hook upon the rear end edges of the flanges 7 of the casing block thus locking the bolt in its fully retracted position.

Associated with the locking bolt is a locking plate 16 (see Fig. 4). This plate is vertically elongated and it stands edgewise to the plane of movement of the locking bolt. As shown herein said plate is provided with a bent-over bottom end 17 which is screwed to the top surface of the meeting rail 3^b of the top sash and the top end of said plate has secured to it in any suitable manner, an L-shaped extension, one leg 18 of which is fixed to the stile of the top sash and the other leg 19 of which projects beyond one edge of the plate 16. In said edge of said plate is provided a plurality of longitudinally spaced recesses 20, 21, 22 and 23, respectively, the recess 20 being the bottom recess and being deeper than the other recesses 21, 22 and 23 which are the intermediate and top recesses respectively.

In applying the parts of my improved lock to a window, the locking bolt casing is positioned with its median plane in the plane of that edge of the locking plate 16 containing the notches 20, 21, 22 and 23 before mentioned. When both sashes are in their fully closed position, the locking bolt 9 is located in the horizontal plane of the deeper notch 20 of the locking plate and said locking bolt when in its normally extended position will project through said notch so that the recess 12 thereof is positioned forwardly of the plane of said locking plate as best shown in full lines in Fig. 3. It is apparent that with the locking bolt in this position, both sashes are securely locked and the lugs 14^a of cap or cover 14 are arranged in the recesses 8 of the casing block, thus holding the locking bolt in this position. Now assume that it is desired to lock the window sashes in a slightly open position. The cover 14 is grasped and tilted upwardly into the dotted line position shown in Fig. 2, thus removing the lugs 14^a from the recesses 8. The cover is thus released and may now be drawn rearwardly until the recess 12 in the bolt is in the plane of the locking plate 16 as shown in dotted lines in Fig. 3 so one sash is capable of vertical movement with respect to the other. When the sash has been thus moved to bring the desired notch into the plane of the locking bolt, the cover is then moved forwardly and then downwardly to again enter the lugs 14^a into the recesses 8. This operation places that portion

of the bolt to the rear of the notch 12 within the desired notch (21, 22, or 23) in the locking plate and thus locks the two together. With the parts in this position the window sash is locked in a partway open position and as will be apparent, the cover locks the bolt against manipulation from the outside as by means of bent wires or like devices.

Assume that it is desired to fully open one sash with respect to the other. The locking bolt is first actuated to bring the recess 12 into the plane of the locking plate and the windows must then be fully closed to bring the bolt into the plane of the notch 20 because any of the others are too shallow or not deep enough to permit the passage of the bolt extension 11 therethrough. The cover is then tilted upwardly and then drawn rearwardly against the action of the spring 10^a so that the bolt extension 11 passes through said notch 20 and the cover is then swung downwardly so that the forward ends of the cover lugs 14^a will engage the rear end of the side flanges 7—7 of the casing and thus hold the bolt retracted against the normal action of its associated spring. When the bolt is in this position the extension 11 will enter the recess 13 in the forward end of the associated side wall of the casing body so that the front end of said bolt and the front end of the casing body are flush with each other. The extension 19 on the locking plate overhangs the notched edge of said plate so that when the notch 12 of the bolt is located in the plane of the locking plate, it will prevent the full opening of either sash as is apparent.

My improved sash lock has many advantages. It consists of but a few parts which may be readily made at substantially a low cost and may be easily assembled and applied to a window. The slidable cover associated with the locking bolt locks the bolt in its fully extended or retracted position and this without the possibility of manipulation from the outside by unauthorized persons.

While in describing my invention, I have referred to certain details of construction, as well as arrangement of parts thereof, I do not wish to be limited thereto except as may be pointed out in the appended claims.

I claim as my invention:

1. A sash lock for windows embodying therein a locking plate secured to one sash, a casing on the other sash, a spring pressed locking bolt in said casing adapted to engage said locking plate, a cover member slidable on said casing and operatively connected to said bolt for actuating the same, and coacting means on said cover and casing whereby said bolt is locked against movement when in either its fully extended or retracted position.

2. A sash lock for windows embodying therein a locking plate secured to one sash, a casing on the other sash, a spring pressed locking bolt in said casing adapted to en-
 5 gage said locking plate, a cover member slidable on said casing and operatively connected to said bolt for actuating the same, and lugs on said cover adapted to engage fixed parts of said casing for locking the
 10 bolt in either its fully extended or retracted position.

3. A sash lock for windows embodying therein, a locking plate secured to one sash, a casing including a body secured to the
 15 other sash, a spring pressed locking bolt in said casing body adapted to engage said locking plate, a cover member slidable on the casing body and having a top wall operatively engaged with the locking bolt and
 20 having side walls with lugs thereon, said casing having recesses at one point to receive said lugs to hold the locking bolt in its extended position, said lugs upon a rearward movement of the cover being adapted
 25 to engage the rear edge of the casing to lock the bolt in its retracted position.

4. A sash lock for windows embodying therein a locking plate secured to one sash, a casing on the other sash, a spring pressed
 30 locking bolt in said casing adapted to en-

gage said locking plate, a cover member slidable on said casing, means operatively connecting said cover and bolt, and coacting engaging means on said cover and casing for
 35 locking said bolt in either its extended or retracted position, said means connecting said cover and bolt permitting a tilting of the cover on said casing to disengage said coacting means on said cover and casing.

5. A sash lock for windows embodying therein a vertically disposed locking plate secured to one sash and having a plurality of longitudinally spaced notches in one edge thereof, with one of said notches deeper
 40 than the others, a casing fixed to the other sash, a spring pressed locking bolt in said casing and having a lateral extension on its forward end and a laterally opening notch to the rear thereof, and means for manipulating said bolt, said bolt extension being
 50 capable of passing through said deeper notch only and said bolt being capable of being manipulated to bring its notch into the plane of said plate so that that portion of the locking bolt to the rear of said notch is capable of passing through any of said
 55 other notches.

In testimony whereof, I have hereunto set my hand, this 4th day of June, 1925.

HARRY W. HEERMANS.