April 25, 1933. W. T. HALL 1,906,153

WINDOW LOCK

Filed July 28, 1932 2 Sheets-Sheet 1

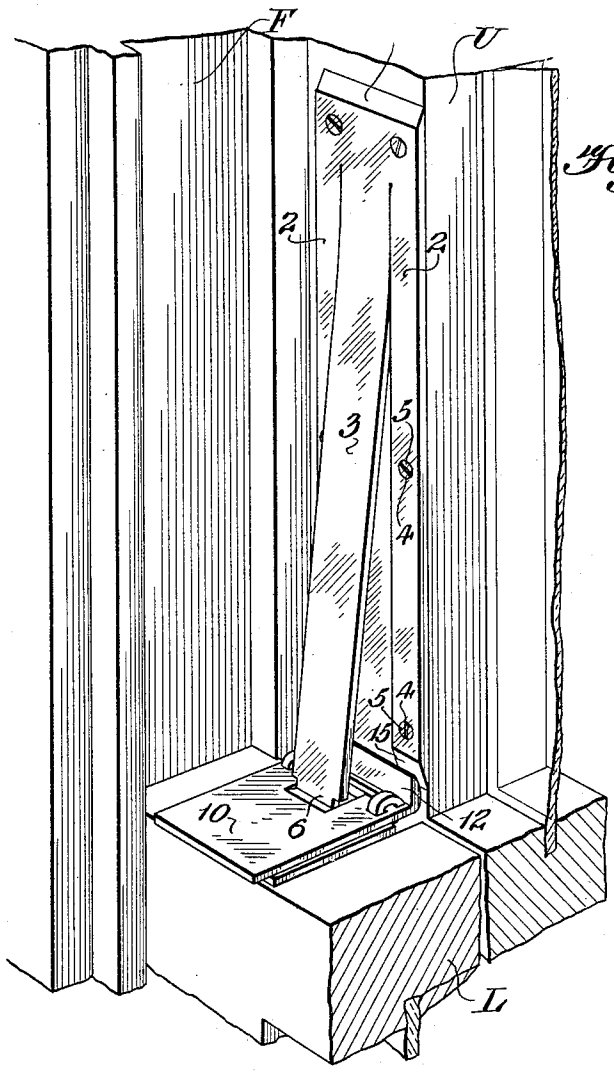


Fig. 1.

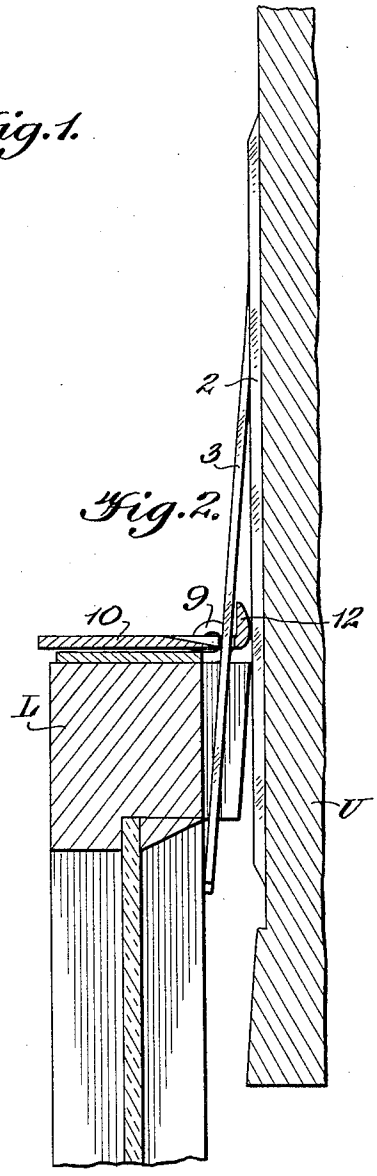


Fig. 2.

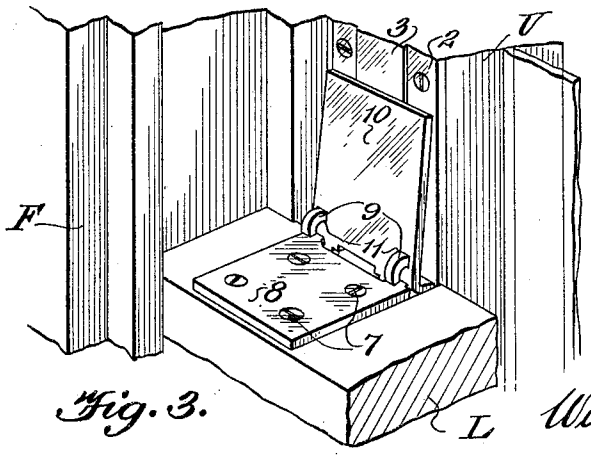


Fig. 3.

INVENTOR.
William T. Hall.
BY
William C. Linton ATTORNEY

April 25, 1933. W. T. HALL 1,906,153

WINDOW LOCK

Filed July 28, 1932 2 Sheets-Sheet 2

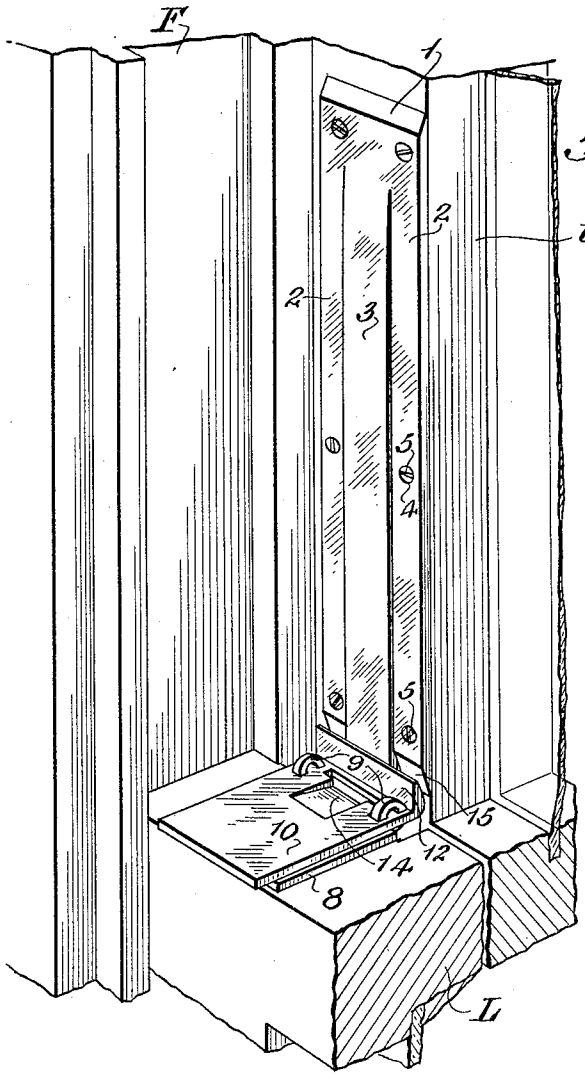


Fig. 4.

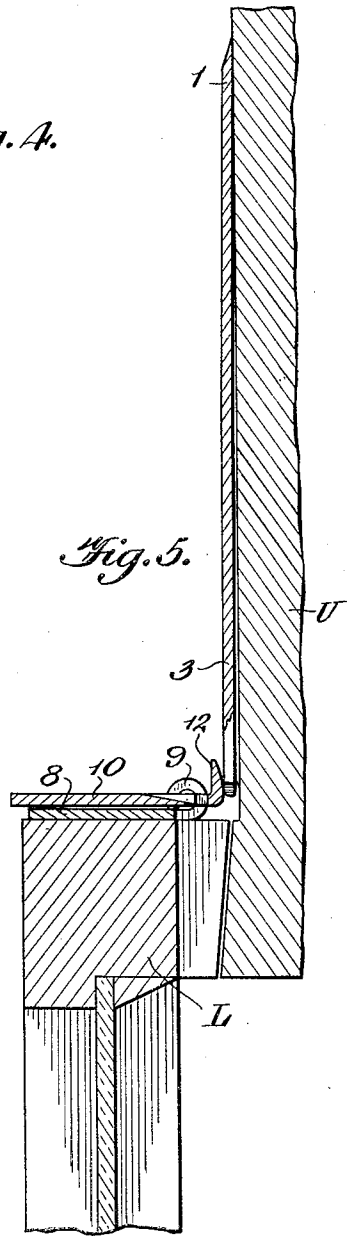


Fig. 5.

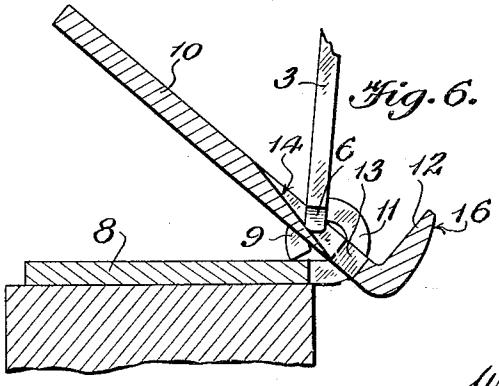


Fig. 6.

INVENTOR.
William T. Hall.
BY
William C. Linton. ATTORNEY

Patented Apr. 25, 1933 1,906,153

UNITED STATES PATENT OFFICE

WILLIAM TULLIS HALL, OF SAN DIEGO, CALIFORNIA, ASSIGNOR OF ONE-THIRD TO HERBERT McCULLOUGH, OF SAN DIEGO, CALIFORNIA

WINDOW LOCK

Application filed July 28, 1932. Serial No. 625,454.

The present invention relates to closure fasteners and more particularly to a window lock, and has for one of its main objects to provide a device capable of effectively and positively locking slidable window sashes either in closed position or in partly opened position.

It is also another important object of the invention to provide a device of the character mentioned embodying means adapted to visually indicate whether or not the locking device is in operative position when the window is open, said means being automatically moved to non-indicating position simultaneously with the locking of the window, which locking may likewise be effected automatically upon closing the window.

Still another feature of the invention resides in the provision of a window lock capable of locking the window sashes in partly opened position, the parts of said lock being so associated that when the sashes are locked thereby in partly opened position, the lock cannot be tampered with by outside intruders.

The invention further contemplates the provision of a window lock which may be easily and readily attached to the window sashes without necessitating changes or material alterations in the window structure, and also the provision of a lock having a simple but strong and dependable construction, thus increasing the desirability of the device and enhancing its commercial value.

Other important objects and advantages of the invention will be in part obvious and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by those persons skilled in the art, I have in the accompanying drawings and in the detailed description based thereupon, set out a possible embodiment of the same.

In these drawings:

Figure 1 is a perspective of a partial window frame and sash supplied with my improved lock, and showing the same in locked closed position,

Figure 2 is a section illustrating the device in locked open position,

Figure 3 is a perspective with the device in unlocked open position,

Figure 4 is a perspective showing a possible positioning of the device to permit the free opening and closing of the window sashes,

Figure 5 is a section through the latter, and

Figure 6 is an enlarged detail indicating operative constructional features of the device.

Having more particular reference to the drawings wherein like characters of reference will designate corresponding parts throughout, I have shown in the several views, the portion of a window frame F wherein is slidably mounted the upper sash U and the lower sash L, the lowermost section of the upper sash U and the uppermost section of the lower sash L adapted to be brought in horizontal parallel relation to normally close the window, in the usual manner.

My improved device may be stated to comprise an elongated strip 1 made of relatively strong spring metal and slit longitudinally throughout the major portion thereof to provide a pair of side legs 2 and an intermediate spring leg 3. The side legs 2 are provided with spaced apertures 4 to accommodate screws 5 or the like for the purpose of securing said strip 1 to the inner face of the upper sash U adjacent the lower section thereof. The intermediate spring leg 3 is bent outwardly with respect to the side legs 2 at its point of jointure with the latter, to gradually depart therefrom whereby the free extremity of said intermediate spring leg 3 will normally project in the path of the upper section of the lower sash L. The free extremity of the spring leg 3 terminates with a tongue 6 for the purpose to be hereinafter specified.

Adapted to be fixedly secured to the upper section of the lower sash L by means of screws 7 or the like, is a rectangularly shaped plate 8 of a length substantially equal to the width of said section of the lower sash. The normally rearward portion of the plate 8, that is, that portion adapted to be posi-

tioned next to the upper sash U is formed with a pair of relatively spaced parallel fingers 9.

Positioned over the fixed plate 8 is a movable plate 10 having hinged connections with said plate 8, the fingers 9 of which are, for this purpose, curved upon themselves and passed in engagement with the plate 10 through openings 11 suitably cut therein. The movable or hinged plate 10 is made slightly longer than the fixed plate 8, in order that both the normal front and rear end portions of said hinged plate may extend for a distance beyond the corresponding ends of the fixed plate 8. The rear end portion of the hinged plate 10 is bent at substantially right angles thereto as shown at 12.

Transversely formed in the plate 10 in close proximity to the bending point of the rear end portion 12 and paralleling the same, is a slot 13 of a size sufficient to accommodate the spring leg 3, which is adapted to pass, at times, through said slot 13, as will appear from the description of the operation of the device to follow hereinafter.

That portion of the normal upper face of the plate 10 adjacent the slot 13 therein, is cut to provide a downwardly directed bevelled recess 14 terminating at the slot 13, the width of said recess, however, being less than the length of the slot, but sufficient to permit the free sliding engagement therewith of the tongue 6 upon the free extremity of the spring arm 3, whereby the latter may act upon said recess 14 to normally urge the hinged plate 10 against the fixed plate 8 and bear thereon to prevent the relative movement of the upper and lower sashes, thus locking the window.

In order to allow for the free pivotal displacement of the hinged plate 10, the lower extremities of the side legs 2, which might possibly hinder the passage of the right angularly upturned portion 12 of the plate 10, are preferably bevelled as shown at 15. Further, for this purpose, the face of said plate portion 12 opposite the leg bevelled extremities 15, may advantageously be tapered as more clearly indicated at 16 in Figure 6 of the drawings, to cooperate with said bevelled extremities.

As previously stated, in using my improved device, the elongated strip 1 is affixed to the inner face of the upper window sash U adjacent the lower section thereof through the intermediary of the side legs 2, so that the spring leg 3 will normally project in the path of the upper section of the lower window sash L when the window is closed, whereas the plate 8 with the movable plate 10 hinged thereto, is fixed to said upper section of the lower sash in alinement with the strip 1.

In this position, it will be understood that the spring leg 3 with its tongue 6 engaged within the bevelled recess 14, will prevent any relative slidable movement of the window sashes and therefore provide an effective lock for the window.

When it is desired to partly open the window for ventilation or other purposes and still lock the window so that it cannot be fully opened on the outside, the spring leg 3 of the strip 1 is depressed until said leg registers with the slot 13 in the plate 10 and is received within said slot when one of the window sashes is slidably displaced. In this particular position, the window may obviously be opened for practically the entire length of the leg 3 but cannot be opened further because the right angularly upturned portion 12 of the plate 10 is then disposed intermediately of said leg 3 and the side legs 2 of the strip 1, thus wedged therebetween and locking the window in partly opened position. When in this position, it will be appreciated that the fastening screws 5 or 7 of the strip 1 or plate 8, respectively, cannot be reached, since the screws 5 are then covered by the adjacent face of the lower sash L, while the screws 7 are protected by the movable plate 10, therefore, obviating any possibilities of the lock being tampered with.

If the window is to be unlocked in order that the same may be completely opened, the movable plate 10 is raised away from the fixed plate 8 to a vertical position and the spring leg 3 of the strip 1 is depressed until it lies substantially flush with the side legs 2, thus causing said spring leg 3 to be positioned in back of the right angularly bent portion 12 of the movable plate 10 and engage with the edge of said portion 12, whereby the spring leg will act upon said edge to normally retain the movable plate 10 in its vertical position. It will now be understood, that, since the parts of the device have no positive interengagement, the windows may be widely opened without obstruction. In order to provide means for visually indicating whether the opened window is unlocked, the exposed face of the movable plate 10 which is now in vertical position, may be supplied with some suitable signalling indication, for instance, that face of the plate 10 may be painted with a contrasting colored paint. Upon closing the window, the edge of the plate right angular portion 12 will become disengaged from the spring leg 3, whereby as clearly indicated in Figure 6 of the drawings, said leg will fly back over the plate 10 and the tongue 6 of the leg engaging the bevelled recess 14 in the plate, will return the latter to its normal position against the fixing plate 8, thus automatically locking the window.

At times, it may become desirable to render the lock inoperative, and for that purpose, the movable plate 10 from this unlocking vertical position above described, may be manually returned against the action of the

spring leg 3, to its normal position against the plate 8. In this instance, the parts will assume the relation illustrated in Figures 4 and 5, that is, the spring leg 3 will be continuously retained in its depressed position by the upturned portion 12 of the movable plate 10, so that the window sashes may freely open or close without actuating the lock. From this position, the operation of the lock may be re-established merely by upwardly flipping the movable plate 10, thereby causing the spring leg 3 to pass over the portion 12 of the plate, whereupon the parts of the device will snap back to operative position.

Because of the front end portion of the movable plate 10 extending beyond the corresponding end of the fixed plate 8, it will be understood that said movable plate 10 may be easily and readily gripped for placement in its various positions, and likewise, due to the bevelled extremities 15 of the strip side legs 2 and the opposed tapering surface of the plate angular portion 12, the displacement of said movable plate will not be interfered with.

Manifestly, the construction herein shown is capable of considerable modification and such modifications as come within the scope of my claims, I consider within the spirit of my invention.

I claim:—

1. A window lock of the character described comprising a spring leg adapted to be fixed to a section of the window, a plate adapted to be mounted upon a second section of the window and engageable with said leg to lock the window in closed position, said plate having a slot formed adjacent one end portion thereof for the passage of the leg therethrough to partly open the window, and that end portion of the plate bent at substantially right angles to the body of the latter and disposed for engagement with said leg upon its passage through the plate to lock the window in its partly open position.

2. A window lock of the character described comprising a spring leg adapted to be fixed to a section of the window, a plate adapted to be carried by a second section of the window and engageable with said leg to lock the window in closed position, means hingedly connecting the plate to said second section of the window, means in said plate for the passage of the leg therethrough to partly open the window, and means formed with the plate and engageable with said leg upon its passage through the plate to lock the window in its partly open position, said last mentioned means being displaceable with the hinged movement of the plate whereby the leg may be positioned out of engagement with said means for the unobstructed opening of the window.

3. A window lock of the character described comprising a spring leg adapted to be fixed to a section of the window and terminating with a tongue, a plate adapted to be mounted upon the second section of the window in alinement with said spring leg, said plate having a bevelled recess thereon accommodating the tongue of said leg to lock the window in closed position, means in said plate for the passage of the leg thereto for the partial opening of the window, and means formed with the plate and engageable with said leg upon its passage through the plate to lock the window in its partially open position.

4. A window lock of the character described comprising a spring leg adapted to be fixed to a section of the window, a plate adapted to be carried by a second section of the window and engageable with said leg to lock the window in closed position, means hingedly connecting said plate to the second section of the window whereby the plate may be displaced to unlocking position for the opening of the window, and means provided on said plate and acted upon by said leg to automatically return the hinged plate to its locking position upon closing the window.

5. A window lock of the character described comprising a spring leg adapted to be fixed to a section of the window, a base plate adapted to be rigidly secured to a second section of the window, a movable plate hingedly connected to said base plate and engageable with the spring leg to lock the window in closed position, means in said movable plate for the passage of the leg therethrough for the partial opening of the window, and means formed with the movable plate and engageable with said leg upon its passage through the plate to lock the window in its partially open position, said last mentioned means being displaceable with the hinged movement of the plate whereby the leg may be positioned out of engagement with the movable plate for the unobstructed opening of the window.

6. A window lock of the character described comprising a spring leg adapted to be fixed to a section of the window, a base plate adapted to be fixedly secured to a second section of the window, a movable plate hingedly connected to said base plate and engageable with the spring leg to lock the window in closed position, said movable plate having a slot formed adjacent one end portion thereof for the passage of the leg therethrough to partly open the window, that end portion of the plate bent at substantially right angles to the body of the latter and disposed for engagement with said leg to lock the window in its partly open position, and said bent portion of the movable plate being displaceable with the hinged movement of the latter whereby the spring leg may be positioned out of engagement

with the movable plate for the unobstructed opening of the window.

7. A window lock of the character described comprising a strip of spring metal slit to provide a pair of side legs and an intermediate spring leg, said spring leg bent to gradually depart from the side legs, the side legs adapted to fixedly secure the strip to a portion of the window, a plate adapted to be carried by a second section of the window and engageable with the spring leg of the strip to lock the window in closed position, means hingedly connecting said plate to the second section of the window whereby the plate may be displaced to unlocking position for opening the window, means provided on said plate and acted upon by said leg to automatically return the hinged plate to its locking position upon closing the window, means in said plate for the passage of the spring leg therethrough for the partial opening of the window, and means formed with the plate and engageable with said leg upon its passage through the plate to lock the window in its partly open position.

In witness whereof I have hereunto set my hand.

WILLIAM TULLIS HALL.