C. W. LANDAUER.

WINDOW LOCK.

APPLICATION FILED JUNE 14, 1913. RENEWED AUG. 18, 1915.

1,180,050.

Patented Apr. 18, 1916.

Fig. 1.

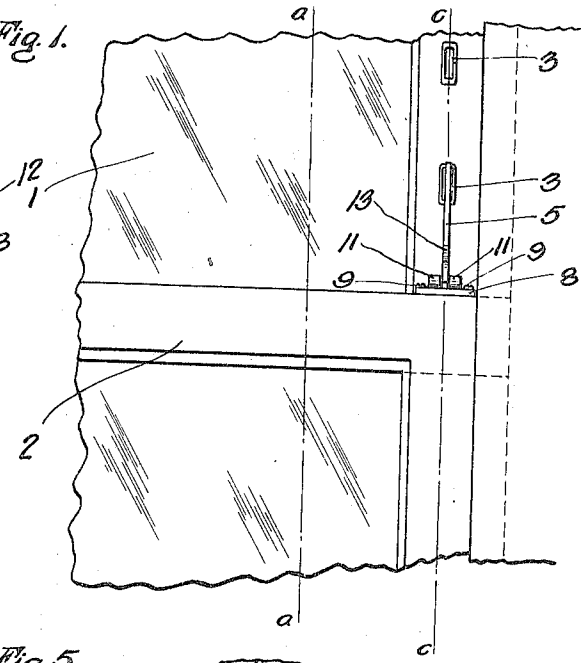


Fig. 2.

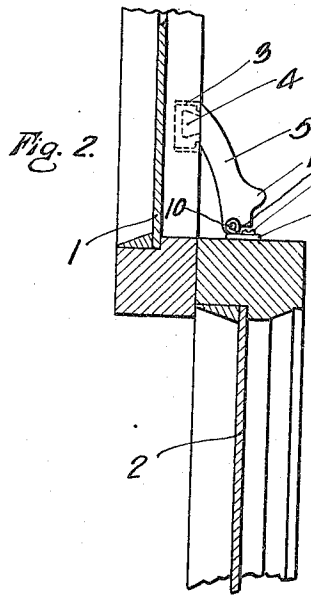


Fig. 3.

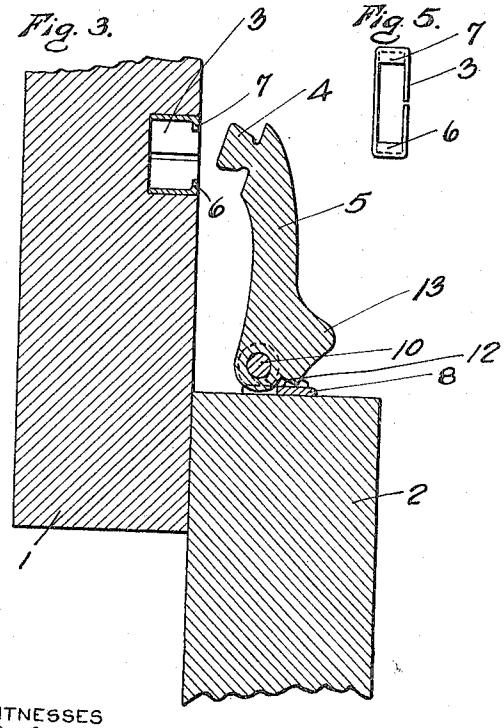
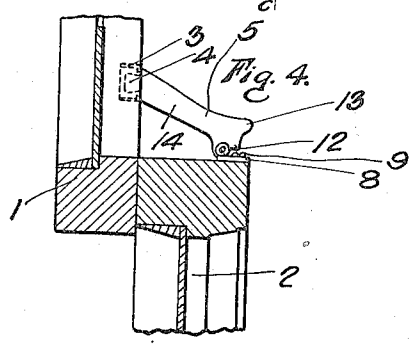


Fig. 5.

Fig. 4.



WITNESSES

I. E. Liverance

L. E. Carroll

INVENTOR

Charles W. Landauer.

By Frank E. Liverance, Jr.

Attorney.

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES W. LANDAUER, OF GRAND RAPIDS, MICHIGAN.

WINDOW-LOCK.

1,180,050. Specification of Letters Patent. Patented Apr. 18, 1916.

Application filed June 14, 1913, Serial No. 773,633. Renewed August 18, 1915. Serial No. 46,174.

To all whom it may concern:

Be it known that I, CHARLES W. LANDAUER, a citizen of the United States, and a resident of the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a certain new and useful Window-Lock, of which the following, taken in connection with the accompanying drawing, is a specification fully disclosing the invention, such that those skilled in the art may construct and practise the same.

My invention relates to window locks, especially of that type applicable to windows having vertically sliding sashes which in normal position are placed one above the other but which may be slidably adjusted up and down to pass by one another to a greater or less extent as desired. It is to be understood, however, that my invention is not limited to vertically sliding window sashes but is applicable in many other situations of similar nature.

It is the purpose of the invention to provide a lock which may be easily applied, which is practically unbreakable, and which will be operative to lock the upper and lower sashes of a window or sliding sash constructions of similar nature in position relative to each other. This may be with the window entirely closed under which condition it is impossible to move the sashes at all, or the lower sash may be raised a certain amount and then locked with relation to the upper sash in such manner that it will remain fixed in place with respect to the upper sash neither an upward or downward impulse given to either of the sashes serving in any manner to affect the locked relation of the window parts. For instance, it may be desired to raise the lower window part a short distance for purposes of ventilation. With the usual lock this cannot be accomplished and still lock the window against entrance of trespassers. With my invention the parts can be locked together and any effort to obtain their unlocking is without effect. Furthermore, these results are secured by use of a very simple construction of few parts, all of simple nature, constructively, and very economical to manufacture.

For an understanding of the construction by which the results above defined together with others not specifically enumerated but which will appear as the description progresses, reference should be had to the accompanying drawings in which,

Figure 1 is a front elevation of a portion of a window, showing the application of my invention thereto. Fig. 2 is a section taken on the line *a*—*a*, Fig. 1 and looking toward the right to show my window lock in side elevation. Fig. 3 is a section, somewhat enlarged, taken on the line *c*—*c*, Fig. 1. Fig. 4 is a sectional view similar to that shown in Fig. 2 showing a slight modification in the locking means. Fig. 5 is a front elevation of one of the metallic sockets embedded in the upper sash frame.

Similar reference numerals refer to similar parts throughout the several views of the drawings.

In the embodiments of my invention shown in the drawings, the upper sash 1 and lower sash 2 are located in the usual relation to each other so as to permit sliding movement of each by the other in vertical planes as is well understood.

The preferred form of my invention is shown in Figs. 1, 2 and 3. Therein is shown a plurality of sockets 3 embedded in the side member of the sash frame of the upper sash adapted to receive the tongue 4 of the locking member 5 pivotally mounted on the upper side of the lower sash frame opposite the side member of the upper sash frame. It is understood of course that socket 3 may be placed in both of the side members of the upper sash frame and that a lever or locking member 5 may be attached at either side of the lower sash frame if desired.

Socket 3 is formed of a piece of sheet metal bent into the form of a rectangle and having openings at the front and back. At the front, however, upwardly and downwardly projecting cross portions or tongues 6 and 7 are provided partially closing the front opening at the bottom and top as shown, and furnishing shoulders interiorly of the socket against which the bottom and upper edge of the tongue 4 engage if sliding movement of the sashes is attempted while the tongue is in a socket. It will be noted that the tongue is wider at its end than at its point of juncture with the body of the locking member 5 and that its upper and lower edges are inclined. The purpose of this construction and its coaction with the socket construction defined will hereinafter be set forth.

In making the pivotal mounting of the locking member 5, I have used a plate 8 which is fastened to the lower sash frame by

screws 9, and at one edge thereof nearest the upper sash frame are upturned a pair of spaced apart bearings between which the lower end of the locking member may be placed to receive the pivot pintle 10 passed through the bearings denoted at 11. A shoulder 12 formed on the locking member 5 stops the pivotal movement of the locking member beyond a certain position back from the frame of the upper sash, and a finger engaging projection 13 formed integral with the member 5 is used to manipulate the member 5 about its pivot to disengage the tongue thereof from the socket 3 in which it may be located to unlock the sashes.

In operation, the foregoing structure may have the parts positioned as shown in Fig. 3, in which case the sashes 1 and 2 are free of each other and may have independent up and down movements. Suppose, however, that the locking member be placed with its tongue within one of the sockets 3. The sashes, in such event, will be securely locked together whether the lower sash has been placed in position to entirely close the window, or whether raised a distance. The tongue 4, owing to its formation, on the attempted raising of the lower sash will engage against the upper depending lip or portion 7 and will be securely retained within the socket. If the lower sash has been raised and then locked, any attempted lowering of the sash will cause the lower inclined edge of the tongue 4 to engage against the upstanding lip or portion 6 of the socket and preclude the coming out of the tongue from the socket. Any attempted forcing of the lock merely transmits the force from the sash to the members 5 placing them under compression and the only way they can give way is by buckling which serves to the more securely fix the member 5 in engagement with the socket with which it is engaged. In practice, the window will be destroyed before the lock will give way. It is also very desirable that the lower part of the window be raised a certain distance and then locked in such position against movement, so that access to a house cannot be had through the window. This is fully accomplished with applicant's device as described. The lower sash may be raised a short distance, for instance, four or five inches, the locking members 5 engaged with sockets in the upper sash, and no chance remains for operating the sashes up or down with respect to each other when so locked, due to the inability of effecting the disengagement of the tongues 4 from the sockets 3. The advantages of a construction which permits this are obvious.

In Fig. 4, I have shown a slight modification in the shape of the locking member, the main or body portion 14 of which lies at an incline with respect to the upper sash frame and the attaching plate 8 being spaced farther from the frame. By reason of this construction, the force tending to operate a sash up or down is borne substantially entirely by the tongue and socket and there is little or no strain on the screws 9 tending to draw them out or loosen them.

Various modifications in structural detail may be resorted to other than those specifically outlined without departing from the spirit of my invention. I, acordingly, do not wish to be limited to the specific structures defined, but consider myself entitled to all modifications falling within the scope of the appended claims. Also, other uses than locking windows may be had for my invention, and will readily occur to those skilled in the art to which it pertains. I, therefore, desire that my invention shall not be taken as limited to the one use outlined.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a device of the character described, a window including an upper sash mounted for up and down sliding movements, and a lower sash similarly mounted, a plurality of sockets secured to a side frame member of the upper sash each socket comprising a hollow shell having an open side partially closed by lips or projections extending toward each other from the upper and lower sides of the front opening, said shells being embedded in the upper frame with the outer surface thereof flush with the surface of the frame member, a locking lever pivotally mounted on the upper side of the upper frame member of the lower sash having a tongue at its free end adapted to enter a socket, said tongue having a downwardly extending projection at its end, whereby when placed in a socket it engages the lower lip or projection upon attempted movement of the lower sash with respect to the upper sash and is securely held in the socket.

2. In a device of the character described, a window including upper and lower sashes mounted for vertical sliding movements by each other, a plurality of sockets embedded in a side member of the upper sash, each socket comprising a hollow shell having an open side partially closed by lips or projections extending toward each other from the upper and lower sides of the opening, a locking member pivotally mounted on the upper side of the upper frame member of the lower sash and having a tongue at the end thereof adapted to enter a socket, said locking member including a body portion extending at an incline for a distance and then in substantially vertical direction to its point of pivotal support, and a shoulder integrally formed on said locking member to limit its pivotal movement away from the upper sash.

3. In a device of the character described, a window including upper and lower sashes mounted for vertical sliding movements by each other, a plurality of sockets each comprising a hollow metallic shell having an open front side partially closed by lips or projections extending toward each other from the upper and lower sides of the front opening embedded in the upper frame flush with the surface thereof, a locking member pivotally mounted on the upper side of the upper frame member of the lower sash and having a tongue at the end thereof adapted to enter a socket, said tongue being wider at its end than where it joins the locking member, a shoulder integrally formed on said locking member and positioned to engage with the upper frame member of the sash when the locking member has been moved to disengage from a socket, and an integral projection formed above the said shoulder to afford means for manual operation of the locking member away from the sockets until stopped by the shoulder.

4. In a device of the character described, a window including upper and lower sashes mounted for vertical sliding movements by each other, a plurality of sockets each comprising a hollow metallic shell having an open front side partially closed by lips or projections extending toward each other from the upper and lower sides of the front opening embedded in the upper frame flush with the surface thereof, a locking member pivotally mounted on the upper side of the upper frame member of the lower sash and having a tongue at the end thereof adapted to enter a socket, said tongue having a projection at its outer end extending downwardly forming a notch between the end of the tongue and the body of the locking member adapted to receive the lower lip of a socket, and a projection on the body of the locking member for manual operation thereof away from said socket, substantially as described.

In testimony whereof, I have hereunto affixed my signature in the presence of two witnesses.

CHARLES W. LANDAUER.

Witnesses:
FRANK E. LIVERANCE, Jr.,
L. E. CARROLL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."