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CASEMENT LATCH

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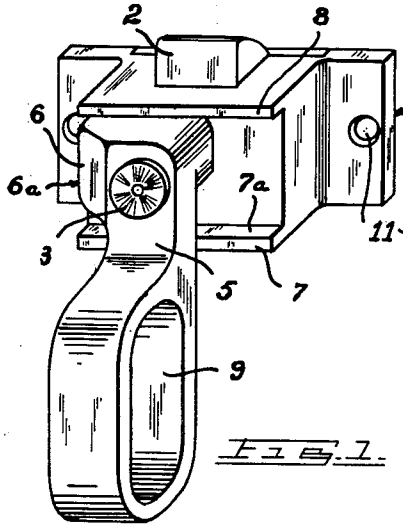


Fig. 1.

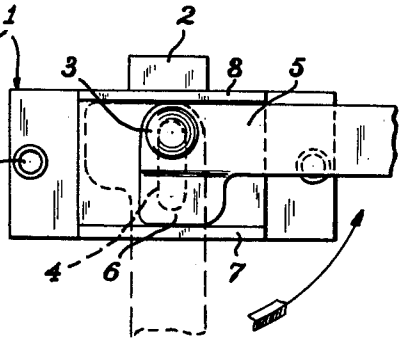


Fig. 2.

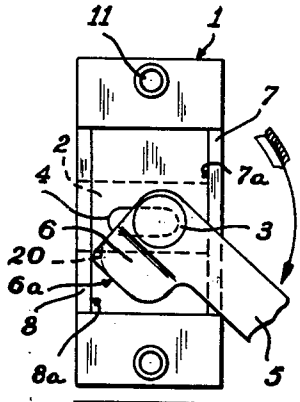


Fig. 5.

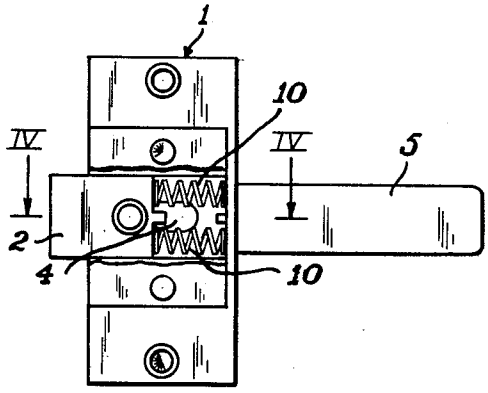


Fig. 3.

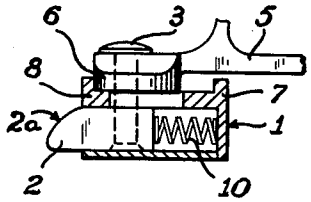


Fig. 4.

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CASEMENT LATCH

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This invention relates to casement latches of the type having a retractable, spring-urged bolt engageable with a socket in the closed position of the window.

A disadvantage common to latches of the type aforesaid when used on downwardly opening windows lies in the fact that there is no ready indication to an observer whether, in the closed position of the window, the bolt of the latch is fully home in its socket or, in fact, is not engaged in the socket and it is an object of the present invention to overcome this disadvantage by providing a casement latch which has an operating lever connected to the bolt, said lever indicating at one position that the bolt is fully extended, that is to say fully home in its socket. Thus, it may be observed at a glance that the window is securely locked and that there is no danger of its falling open to the possible injury of a person in the vicinity.

According to the invention, a casement latch comprises a casing, a retractable bolt extending from said casing and spring-urged outwardly thereof, a pin secured to said bolt and extending through a slot in the outer wall of said casing, said slot extending substantially longitudinally of the axis of retraction of the bolt, and a lever pivotally mounted on said pin and having a lateral extension engageable with an abutment on the casing to prevent pivotal movement of said lever to a predetermined position unless said bolt is in its fully extended position, whereby said fully extended position is readily ascertainable.

Preferably, said lever is provided with a hook or eye by means of which said lever may be pulled in the direction of movement of said bolt to retract said bolt and release the latch.

Preferably also, said casing has another abutment engageable by said lateral extension of the lever, whereby the bolt may be retracted by pivotal movement of said lever in one direction.

An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIGURE 1 is a perspective view of a casement latch;

FIGURE 2 is a front elevation of the casement latch and illustrates the predetermined position to which the lever may be pivoted to indicate that the bolt is in its fully extended position, this indicating function of the lever being especially advantageous when the latch is applied to a window swingable downwardly about a horizontal axis;

FIGURE 3 is a rear elevation of the casement latch;

FIGURE 4 is a part-sectional view on the line IV—IV of FIGURE 3; and

FIGURE 5 is a front elevation of the casement latch and illustrates the manner in which the latch may be released by pivotal movement of the lever, this function of the lever being especially advantageous when the latch is applied to a side hung window.

Referring firstly to FIGURES 1 to 4 of the drawings, the casement latch comprises a casing 1, a retractable bolt 2 extending from said casing and spring-urged outwardly thereof, a pin 3 secured to said bolt and extending through a slot 4 in the casing, and a lever 5 pivotally mounted on the other end of pin 3 and having a lateral extension 6. Flanges 7 and 8 on the casing 1 are alternatively engageable by extension 6 on pivotal movement of lever 5 about pin 3. Lever 5 has an eye portion 9 which may be utilized in the depending position of the lever for pulling the lever downwards to release the latch and open the window.

Springs 10, abutting the rear face of the bolt 2, urge the bolt to its fully extended position and the sliding movement of the bolt is limited by engagement of pin 3 with the ends of slot 4.

The lever extension 6 is so dimensioned that the outer end 6*a* thereof is spaced from the center of pin 3 a distance equivalent to that between the center of pin 3, in the fully extended position of bolt 2, and the side 7*a* of flange 7. Thus, the lever can only be turned to the position shown in FIGURE 2 when the bolt is fully extended. An attempt to close the window can only be considered successful, therefore, when the lever can be turned to the position shown in FIGURE 2 to indicate that the bolt is fully home in its socket.

Referring now to FIGURE 5, it will be seen that when the casement latch is applied to a side hung window the lever 5 will serve to release the latch for opening the window when said lever is depressed in the direction of the arrow to cause engagement of flange 8 by lever extension 6.

The latch may be attached to a window by screws passing through apertures 11 in the base of the casing 1.

In the case of a pair of opposing side hung windows where the bolts 2 face each other, it will be advantageous to have the extensions 6 on opposite hands of the lever 5 so that either window may be opened by depressing its associated lever.

The latch may be adapted for use with outward swinging, horizontally pivoted windows by arranging the bolt with its beveled face 2*a* directed inwards, as shown in FIGURE 4. It will be noted that in this position the bolt is reversed from the position it occupies in FIGURE 1.

Where desired, the extension 6 may be bevelled at 20, as shown in dotted lines in FIGURE 5, to allow continued pivotal movement of lever 5 in the direction of the arrow to bring the outer edge 6*a* of extension 6 flush with flange 8 and lock the bolt 2 in retracted position. Thus, the distance from the edge 6*a* of the extension 6 to the center of the pin 3 is equivalent to the distance from the surface 8*a* of the flange 8 to the center of the pin 3 when the bolt is fully retracted. This feature is advantageous in the case of long windows utilising more than one latch, for example one at each end.

What we claim as our invention is:

1. A casement latch comprising a casing, a retractable bolt extending from said casing and spring-urged outwardly thereof, a pin secured to said bolt and extending through and beyond a slot in the outer wall of said casing, said slot extending substantially longitudinally of the axis of retraction of the bolt, a lever pivotally mounted on said pin externally of said casing, and an abutment on said casing, said lever being adapted to engage said abutment to prevent pivotal movement of said lever to a predetermined position unless said bolt is in its fully extended position, whereby said fully extended position is readily ascertainable.

2. A casement latch as claimed in claim 1, wherein said lever is provided with a hook or eye by means of which said lever may be pulled in the direction of movement of said bolt to retract said bolt and release the latch.

3. A casement latch as claimed in claim 1 in which said lever is provided with a lateral extension adapted to be the part of the lever which engages said abutment.

4. A casement latch as claimed in claim 3, wherein said casing has another abutment engageable by said lateral extension of the lever on reverse pivoting of the

lever to effect sliding movement of said pin in said slot, thereby effecting retraction of the latch bolt.

5. A casement latch comprising a casing adapted to be secured to a casement, a retractable bolt mounted in and extending from said casing, spring means within said casing to spring-urge the bolt outwardly thereof, a slot in a wall of said casing extending longitudinally of the axis of retraction of said bolt, a pin secured to the rear portion of said bolt and extending through said slot, a handle pivotally mounted on said pin exteriorly of said casing, a lateral profile-cam like extension on said handle adjacent said pin, and two upstanding flanges spaced fore and aft of said slot on the said wall of the casing and extending normally to the axis of retraction of said bolt, said flanges being selectively engageable by said extension on manual clockwise or anticlockwise rotation of said handle about said pin, engagement of one of said flanges by any part of said extension other than the extreme outer edge thereof, on pivotal movement of said handle in one direction, serving to indicate that the bolt is not fully extended whilst engagement of the other of said abutments by reverse pivotal movement of said handle serves to retract said bolt.

6. A casement latch as claimed in claim 5, in which said bolt may be locked in its retracted position by engagement of the extreme outer edge of said extension with said other abutment.

7. A casement latch comprising a casing adapted to be secured to a casement, a retractable bolt mounted in and extending from said casing, spring means within said

casing to spring-urge the bolt outwardly thereof, a slot in a wall of said casing extending longitudinally of the axis of retraction of said bolt, a pin secured to the rear portion of said bolt and extending through said slot, a handle pivotally mounted on said pin exteriorly of said casing, a lateral profile-cam like extension on said handle adjacent said pin, and two upstanding flanges spaced fore and aft of said slot on the said wall of the casing and extending normally to the axis of retraction of said bolt, said flanges being selectively engageable by said extension on manual clockwise or anticlockwise rotation of said handle about said pin, said lateral extension being so dimensioned that the distance from the center of said pin to the extreme outer edge of the lateral extension is equal to the distance between the center of the pin in its foremost position and the adjacent face of the flange disposed aft of said slot.

8. A casement latch as claimed in claim 7, wherein the distance from the center of said pin to the extreme outer edge of said extension is also equal to the distance between the center of the pin in its rearmost position and the adjacent face of the flange disposed to the fore of said slot.

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