Aug. 21, 1951 S. C. REYNAUD 2,565,092

CASEMENT WINDOW LOCK

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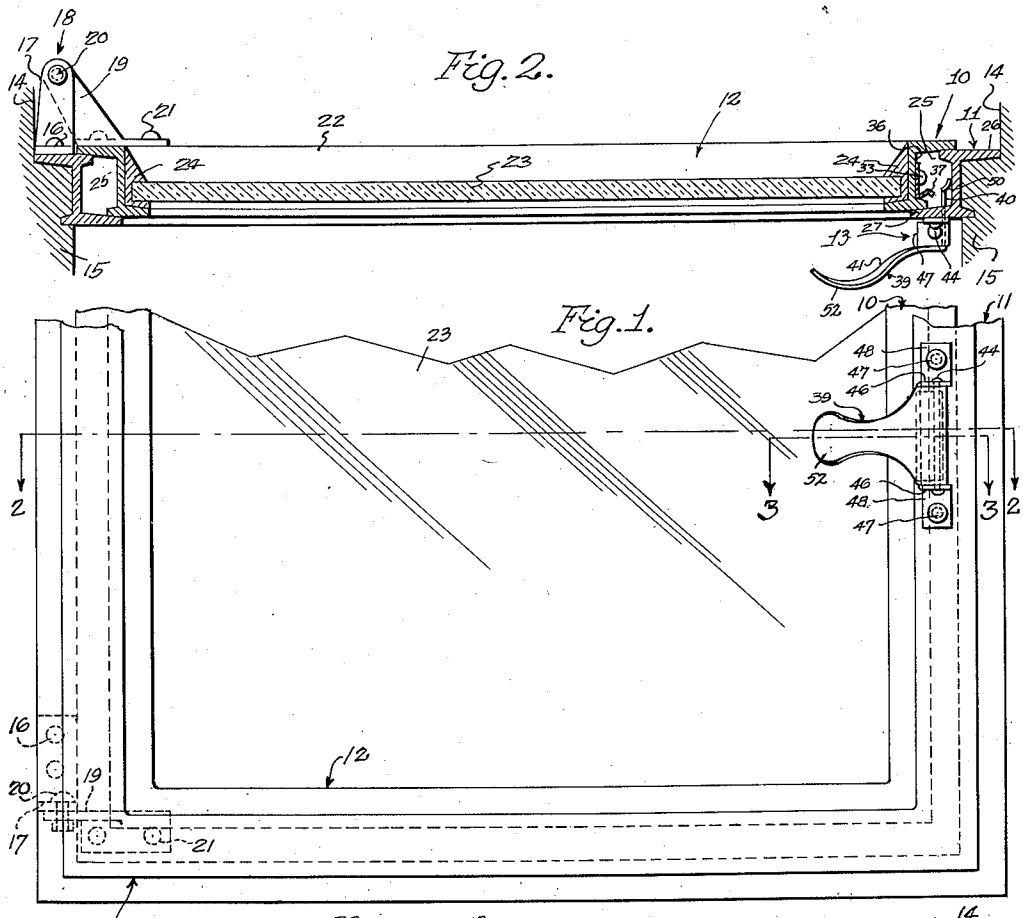


Fig. 2.

Fig. 1.

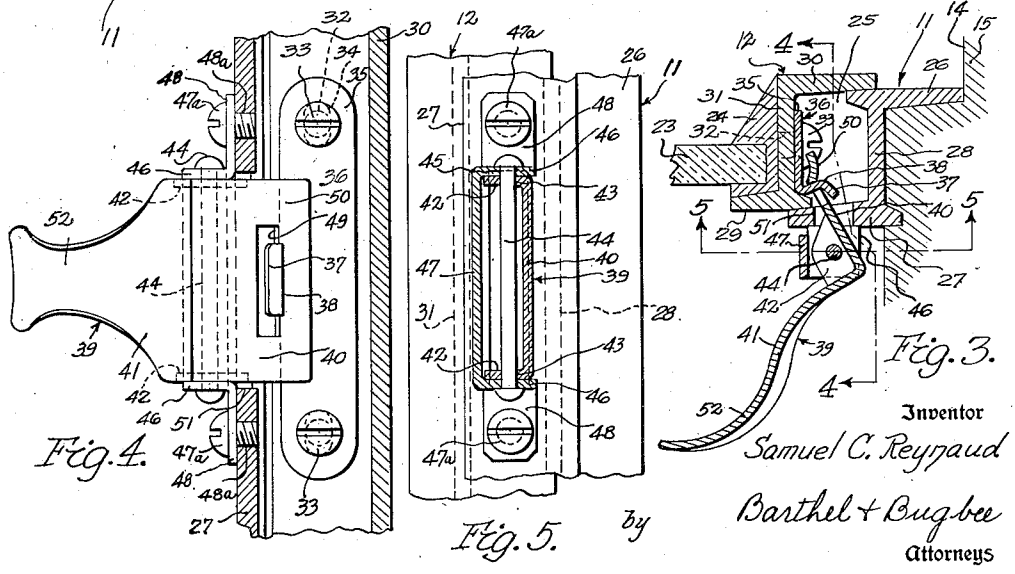


Fig. 4.

Fig. 5.

Fig. 3.

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CASEMENT WINDOW LOCK

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1 Claim. (Cl. 292—202)

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This invention relates to locking devices and in particular to casement window locks.

One object of this invention is to provide a casement window lock which in its locked position lies very close to the window so that it avoids interference with Venetian blinds or curtains.

Another object is to provide a casement window lock which can be operated through the slats of a Venetian blind without the necessity of raising the blind, merely by inserting the finger between the slats of the blind and pulling the handle outward to lock the window or pushing it inward to unlock the window.

Another object is to provide a casement window lock which is equally well adapted to the locking of casement windows which swing either to the right or to the left, without requiring right-handed or left-handed locks.

Another object is to provide a casement window lock of simple and easily manufactured form which can be made at low cost and sold at a low price, yet which has few parts to get out of order.

In the drawings:

Figure 1 is an elevation of a casement window, viewed from inside the building, showing a casement window lock according to a preferred form of the invention;

Figure 2 is a horizontal section taken along the line 2—2 in Figure 1, showing the lock in its unlocked position;

Figure 3 is an enlarged detail horizontal section similar to the right-hand end of Figure 2 but taken along the line 3—3 in Figure 1 and showing the lock in its locked position;

Figure 4 is an approximately transverse vertical section taken along the line 4—4 in Figure 3; and

Figure 5 is a vertical section taken along the line 5—5 in Figure 3 at right angles to Figure 4.

Referring to the drawings in detail, Figure 1 shows a casement window generally designated 10 consisting generally of a window frame 11 with a casement window 12 hinged thereto and locked in position by a lock 13, according to a preferred form of the invention. The frame 11 is inserted in an opening 14 in the building wall 15 (Figure 2) and is of approximately rectangular form and of roughly Z-shaped cross-section. Mounted on a vertical edge of the frame 11 such as by the fasteners 16 is the inner arm 17 of a hinge bracket generally designated 18, the outer arm 19 of which is hinged to the inner arm 17 by the hinge pins 20. The outer

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arm 19 is also flanged, and is secured as by the fasteners 21 to the window frame 22.

The window frame 22 is likewise of roughly Z-shaped cross section and has mounted therein one or more panes 23 of glass or other transparent or translucent material, a conventional mounting medium 24 being employed. The stationary frame 11 and the movable window frame 12 is assembly form a chamber 25 of rectangular cross-section lying between the flanges 26 and 27 and connecting web 28 of the stationary frame 11 (Figure 3) on the one side and between the flanges 29 and 30 and their connecting web 31 on the opposite side. The flanges 30 and 29 (Figure 3) overlap the flanges 26 and 27 which they respectively engage.

The movable window frame 12 is drilled and threaded as at 32 to receive a pair of screws 33 which are inserted through vertically elongated holes 34 (Figure 4) in the base plate 35 of a keeper 36 of resilient material such as spring steel. The keeper 36 has a tongue 37 in the form of an arm projecting transversely from the base plate 35. The tongue 37 is bent intermediately and at its junction with the base plate 35 to form a hump 38 at the mid-portion thereof.

Engageable with the tongue 37 of the keeper 36 is a swinging latch 39 of approximately bell-crank form having inner and outer arms 40 and 41 with upper and lower connecting flanges 42 which are bored as at 43 for the passage of a pivot pin 44. The opposite ends of the pivot pin 44 also pass through holes 45 in the upper and lower arms 46 of an approximately U-shaped bracket 47 having angled attachment flanges 48 projecting from the arms 46. The latter are drilled for the passage of screws 47a which are threaded into threaded holes 48a in the stationary window frame 11 (Figure 4). The arm 40 is provided with an elongated aperture 49 (Figure 4) near its outer end, the latter being bent as at 50 in order to prevent it from contacting the base plate 35 prematurely. The flange 27 of the stationary frame 11 is provided with an elongated vertical aperture 51 for the passage of the arm 40 of the swinging latch 39. The arm 41 of the latter is provided with an outwardly curved end portion 52 which serves as a handle for engagement by the end of the user's fingers.

In the operation of the invention, let it be assumed that the parts are in the positions of Figures 1 and 2, with the window 12 closed but not yet locked. To lock the window, the operator hooks the end of his finger over the concave side of the curved portion 52 of the latch 39 and pulls

it outward toward him into the position shown in Figures 3 and 4. When this is done, the arm 40 swings toward the keeper 36 so that the tongue 37 enters the aperture 49 and the outer edge of the latter slides over the hump 38. The tongue 37 yields while this is occurring, springing inward to permit the end portion 50 of the arm 40 to pass over the hump 38. The latter then prevents the accidental swinging of the latch 39 into its unlocked position and the lock 13 is thus firmly but yieldingly held in its locked position (Figures 3 and 4).

To unlock the lock 13, the operator pushes against the convex portion of the curved end 52 of the latch arm 41, pushing it toward the window 12 from the position of Figure 3 to that of Figure 2. When this occurs, the arm 40 swings to the right around the pivot pin 44, causing the end portion 50 thereof to snap over the hump 38 of the tongue 37 and into the position shown in Figure 2. The window 12 may then be opened in the usual way, swinging outward around its hinge pins 20.

What I claim is:

A latch structure for locking the tongued keeper of a swinging casement window to its frame, comprising a bracket attachable to the frame,

and a latch lever of bell-crank form pivoted to said bracket, said latch lever having a longitudinally elongated outer arm and having an inner arm bent substantially at right angles to said outer arm, said inner arm adjacent its free end being provided with an aperture extending therethrough and said free end beyond the aperture being bent to provide a laterally extending portion, the tip of said laterally extending portion being offset relatively to the remainder of said inner arm.

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