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GB 2212849 A GB 2101667 A

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(71) Applicant
Carl Mark Stevens
13 Queens Close, Newport, Gwent, NP9 5FG,
United Kingdom

(72) Inventor
Carl Mark Stevens

(74) Agent and/or Address for Service
Page Hargrave
Temple Gate House, Temple Gate, Bristol, BS1 6PL,
United Kingdom

(54) Door or window security bolt

(57) A door/window in which the framing (10) of the opening member of the door/window and the surround (6) that is set in a wall (6A) are fabricated from hollow extrusions has a deadlock arrangement comprising a pivoted bolt member (1) housed within one of the surround (6) or the framing (10) and pivotable from a withdrawn, opening member unlocked, position within the surround or the framing to an extended position entered in the other of the surround or the framing to lock the opening member in its closed position. In one form the surround (6) or the framing (10) in which the latch member (1) is housed is provided with a catch means that serves to retain the latch member in its extended position, the action of this catch means being overridable to allow desired movement of the latch member between its withdrawn and extended position. The catch means can be in the form of resilient nibs for engaging the latch member (1) or alternatively can be a key-operated lock fitted to the latch member (1). The head (4) of the bolt can be slotted, for operation by the edge of a coin.

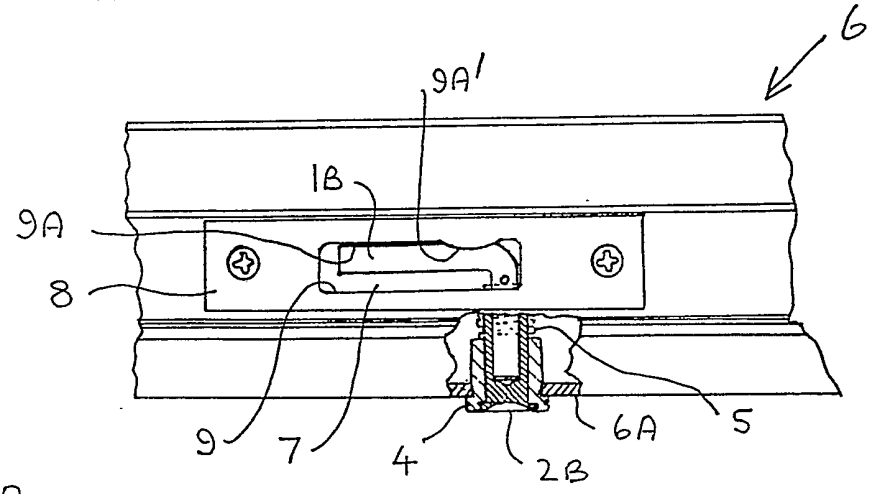

Fig. 2

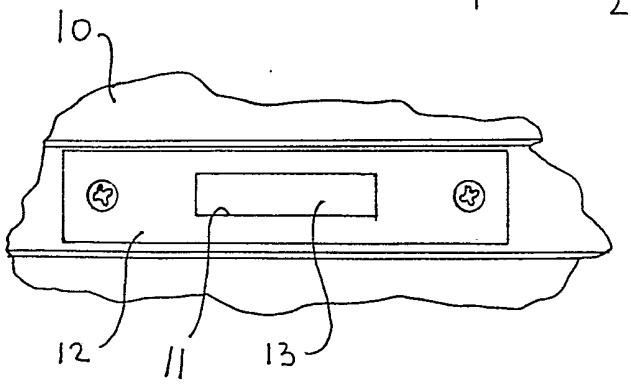

Fig. 3

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

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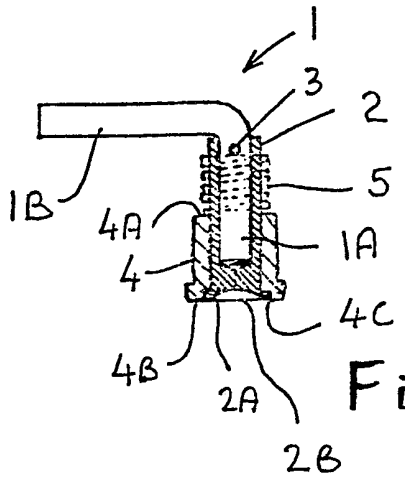

Fig. 1

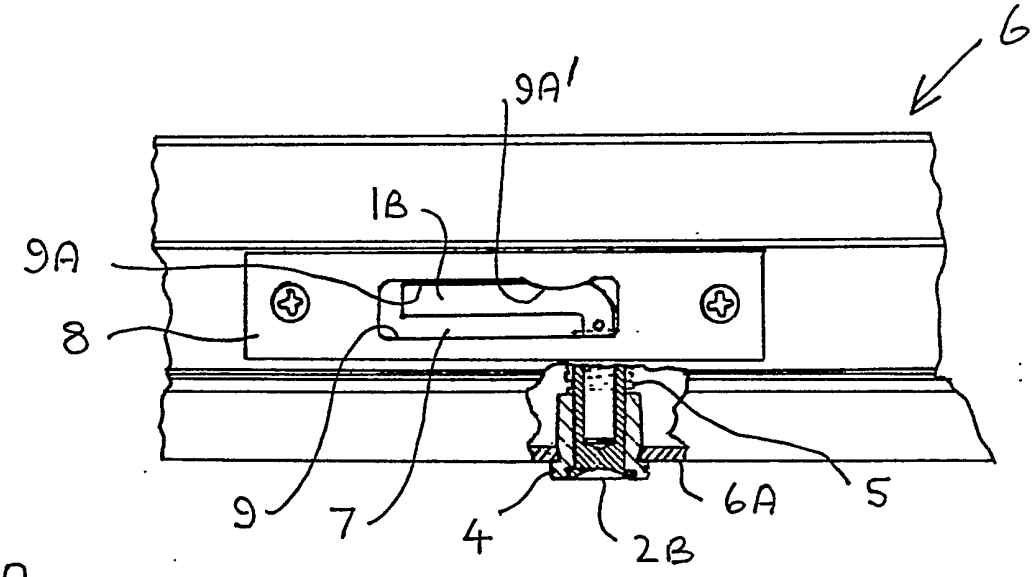

Fig. 2

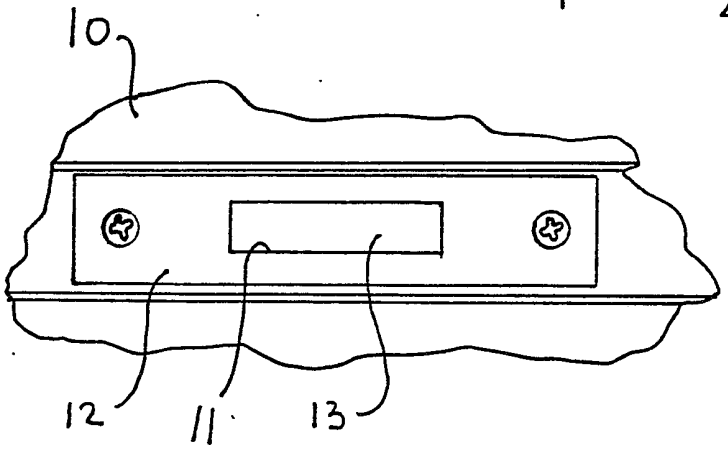

Fig. 3

DOOR/WINDOW DEADLOCK ARRANGEMENTS

This invention relates to door/window deadlock arrangements and is particularly concerned with a deadlock arrangement for door and windows in which the framing of the opening member and the surround that is set in the wall are fabricated from hollow extrusions of aluminium or plastics (for example unplasticized polyvinyl chloride usually referred to as rigid PVC or UPVC).

Rendering doors and windows that are fabricated from hollow extrusions secure against unauthorised entry is a problem as such doors and windows, by the nature of the material of which they are formed, are vulnerable to being forced open by use of a lever utilised to bend the framing of the opening member away from the surround.

The present invention provides a door/window having a deadlock arrangement in which the framing of the opening member of the door/window and the surround that is set in a wall are fabricated from hollow extrusions, the deadlock arrangement comprising a latch member housed within one of the surround or the framing and pivotable from a withdrawn, opening member unlocked, position within the surround or the framing to an extended position entered in the other of the surround or the framing to lock the opening member in its closed position. In one form the surround or the framing in which the latch member is housed is provided with a catch means that serves to retain the latch member in its extended position, the action of this catch means being overridable to allow desired movement of the latch member between its withdrawn and extended position. The catch means can be resilient nibs for engaging the latch member formed in the material of the surround or the framing at opposed edges of a slot through which the latch member passes in moving to its extended position, or this slot can have plain edges and there can be a catch plate

mounted on the surround or the framing such that in moving to its extended position the latch member passes through a slot in this catch plate, this slot having a cam edge portion over which the latch member rides against spring opposition to reach the opening member locked position, the presence of the resilience nibs or of the cam edge portion serving to retain the latch member in its extended position. Alternatively the catch means can be a key-operated lock fitted to the latch member.

The invention also provides a door/window deadlock arrangement for a door/window in which the framing of the opening member and the surround that is set in a wall are fabricated from hollow extrusions, the deadlock arrangement comprising a latch member pivotably mounted in a housing that is for mounting in one of the surround and the framing such that the latch member is housed within the surround or the framing and is pivotable from a withdrawn, opening member unlocked, position within the surround or the framing to an extended position for entry into the other of the surround or the framing to lock the opening member in its closed position. This deadlock arrangement can further comprise a catch plate for mounting on that one of the surround or framing in which the latch member is housed such that, in use, in moving to its extended position the latch member passes through a slot in this catch plate, this slot having a cam edge portion over which, in use, the latch member rides against spring opposition to reach the opening member locked position, the presence of the cam edge portion serving to retain the latch member in its extended position.

The present deadlock arrangement is of uncomplicated construction and hence simple and inexpensive to manufacture and one or more such arrangements as necessary can be fitted to a door/window, located as appropriate.

For a better understanding of the invention and to show how the same may be carried in to effect, reference will now be made, by way of example, to the accompanying drawing, in which:-

Figure 1 is a sectional view of a latch member and associated components of a door/window deadlock arrangement,

Figure 2 shows the latch member and its associated components of Figure 1 fitted in a window surround set in a wall (not shown), and

Figure 3 shows an apertured lock plate for receiving the latch member in locked position, set in the framing of the opening member of the window.

Referring first to Figure 1, the latch member 1 is a right angled rod having one limb 1A retained in a spindle 2 by a pin 3. The spindle 2 is rotatably mounted in a housing constituted by a bush 4 and is retained therein by the action of a compression spring 5 set between the inner end 4A of the bush 4 and the pin 3. At the outer end 4B of the bush 4 a flange 2A of the spindle 2 is received in a recess 4C in the bush 4. The outer end of the spindle 2 has a slot 2B for receiving a coin or other member for turning the spindle 2 in the bush 4.

As shown in Figure 2, the latch member 1 and its associated components are mounted in the base member of the window surround 6, of a top hung window, which is a hollow extrusion of aluminium or UPVC, with the bush 4 held fast in an aperture in a wall 6A of the extrusion as a push or snap fit therein, and with the other limb 1B of the latch member 1 lying within the surround. At this zone the surround 6 is provided with a slot 7. A catch plate 8 is secured to the surround 6 so that a slot 9 therein corresponds with the slot 7 in the surround 6.

Using a coin or similar object entered in the slot 2B in the end 2A of the spindle 2, the spindle 2 and with it the latch member 1 can be pivoted so that the limb 1B of the latch member swings out of the surround 6, through the slots 7 and 9. The spring 5 urges the limb 1B against one edge 9A of the slot 9 and towards the end of its movement the limb 1B encounters a cam edge portion 9A' over which the limb 1B rides against the opposition of the spring 5. In its fully extended position (projecting out of the plane of the paper in Figure 2) the limb 1B is just beyond the cam edge portion 9A' and hence the presence of this portion 9A' serves to retain the latch member 1 in its fully extended position until the latch member 1 is positively moved back to its withdrawn position within the surround 6 by operation of a coin or other driving member in the spindle slot 2B.

With the window closed, the latch member limb 1B in moving to its extended position enters the framing 10 (Figure 3) of the window through a slot 11 in a lock plate 12 secured to the framing 10, the slot 11 of which corresponds with a slot 13 in the framing.

The catch constituted by the cam edge portion 9A' and the spring 5 can be omitted and instead there can be provided a catch constituted by resilient nibs on opposite edges of the slot 7 in the surround 6, past which the latch member limb 1B snaps to reach the fully extended position. Alternatively the catch can be constituted by a key-operated lock fitted to the spindle 2.

Any of the forms of catch which have been described are provided where the latch member 1 is mounted in the base member of the surround of a top hung window. If the latch member 1 is mounted in an upright of a surround of a side hung window, or door, and is set so that the limb 1B swings downwards into its fully extended position, a catch can be omitted if desired although the positive

restraint of the latch member in its locking position provided by a catch may still be preferable.

It will be appreciated that the latch member 1 and its associated components can be mounted either in the surround 6 as described, or in the framing 10 of the opening member, in which latter case the lock plate 12 is, of course, secured to the surround 6. In this latter case the latch member 1 can be carried by, so as to operate with, the handle conventionally provided for securing the opening member in closed position.

The deadlock arrangement that has been described is suitable for top hung windows, or side hung windows or doors. One or more such arrangements as necessary can be fitted to a door or window, located as appropriate.

CLAIMS

1. A door/window having a deadlock arrangement in which the framing of the opening member of the door/window and the surround that is set in a wall are fabricated from hollow extrusions, the deadlock arrangement comprising a latch member housed within one of the surround or the framing and pivotable from a withdrawn, opening member unlocked, position within the surround or the framing to an extended position entered in the other of the surround or the framing to lock the opening member in its closed position.

2. A door/window deadlock arrangement as claimed in claim 1, wherein the surround or the framing in which the latch member is housed is provided with a catch means that serves to retain the latch member in its extended position, the action of this catch means being overridable to allow desired movement of the latch member between its withdrawn and extended position.

3. A door/window deadlock arrangement as claimed in claim 2, wherein the catch means comprises resilient nibs for engaging the latch member formed in the material of the surround or the framing at opposed edges of a slot through which the latch member passes in moving to its extended position, these resilient nibs serving to retain the latch member in its extended position.

4. A door/window deadlock arrangement as claimed in claim 2, wherein there is, in the material of the surround or the framing, a slot through which the latch member passes in moving to its extended position, this slot having plain edges and the catch means comprising a catch plate mounted on the surround or the framing in association with the slot such that in moving to its extended position the latch member passes through a slot in this catch plate, this slot having a cam edge portion over which the latch member rides against spring

opposition to reach the opening member locked position, the cam edge portion serving to retain the latch member in its extended position.

5. A door/window deadlock arrangement as claimed in claim 2, wherein the catch means comprises a key-operated lock fitted to the latch member.

6. A door/window deadlock arrangement for a door/window in which the framing of the opening member and the surround that is set in a wall are fabricated from hollow extrusions, the deadlock arrangement comprising a latch member pivotably mounted in a housing that is for mounting in one of the surround and the framing such that the latch member is housed within the surround or the framing and is pivotable from a withdrawn, opening member unlocked, position within the surround or the framing to an extended position for entry into the other of the surround or the framing to lock the opening member in its closed position.

7. A door/window deadlock arrangement as claimed in claim 6 and further comprising a catch plate for mounting on that one of the surround or framing in which the latch member is housed such that, in use, in moving to its extended position the latch member passes through a slot in this catch plate, this slot having a cam edge portion over which, in use, the latch member rides against spring opposition to reach the opening member locked position, the cam edge portion serving to retain the latch member in its extended position.

8. A door/window deadlock arrangement substantially as hereinbefore described with reference to the accompanying drawing.

Patents Act 1977
Examiner's report to the Comptroller under Section 17 (The Search Report)

Application number

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Relevant Technical fields

(i) UK Cl (Edition L) E2A (AAR ACCC AEA)

(ii) Int Cl (Edition 5) E05B 65/00; E05C 3/00 3/04

Search Examiner

J D WILSON

Databases (see over)

(i) UK Patent Office

(ii)

Date of Search

22 FEBRUARY 1993

Documents considered relevant following a search in respect of claims ALL

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB A 2212849 (GOODWIN) - whole document	1, 6 at least
X	GB A 2101667 (SCHLEGEL) - whole document	1, 6 at least

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

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E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

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