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(58) Field of search

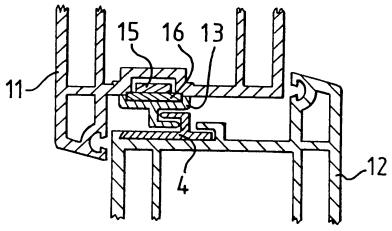
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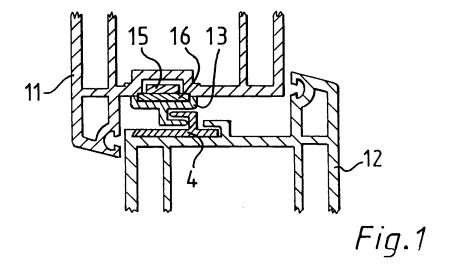
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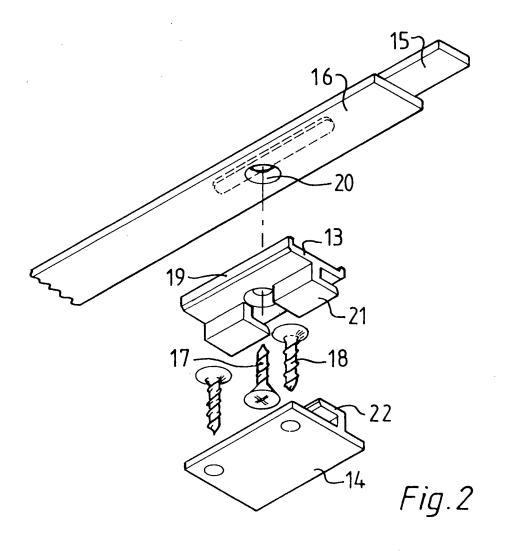
Selected US specifications from IPC sub-class E05C

(54) Security device for casements

(57) A security device for a casement window or door in which a first element (13) is secured to the outer edge thereof and cooperates with a second element (14) secured to the adjoining edge of the frame surrounding the opening for the window or door, to restrain movement of the first element (and therefore the window or door) in a direction towards the hinged edge of the frame, when the window or door is closed. The two elements each have a U-profile, the one fitting into the other when the door or window shuts.







SPECIFICATION

Security device for casements

5 Field of the invention

This invention relates to a security device for casements, which term as used herein refers to an edge hinged door or window which closes by pivotal movement into the plane of the frame.

Background to the invention

Casements, in particular windows and external doors, are provided with latching devices

15 operative in the closed condition to deter unauthorised opening from the exterior. These locking devices can take various forms, but invariably comprise in the case of a window an element which, by operation of a handle, is

20 moved outwardly of the casement, at the opposite edge to the hinge in the plane of the frame, in order to engage into a recess in the frame or a part carried thereby. Locking devices for external doors are effective in an analogous manner.

However, forced entry can often be effected by levering the casement top and bottom to effect bowing thereof, thereby to spring the locking element out of the recess. This is 30 especially true when the projection of the locking element into the recess is not very deep, as for example with the well known espagnolette latch.

The espagnolette latch comprises, in general 35 terms, a bar fixed to the frame which is formed with L-shaped slots, and a sliding bar on the casement which is formed with locking pins for engaging with the L-slots. In the nonlatching position of the sliding bar, the locking 40 pins enter the horizontal limbs of the L-slots as the casement is closed and are brought to the inner ends of said limbs in the fully closed condition. By use of a handle, it is then possible to move the sliding bar into its latched 45 condition, as the locking pins move along the vertical limbs of the L-slots. Especially in the instance of casements with PVC profiles, where espagnolette latches are commonly employed, it is usually not practicable for the 50 locking pins and slots with which they cooperate to be sufficiently deep to prevent forced entry by bowing the casement.

The invention

According to the invention, a casement is provided, in addition to a handle-operable latch, with a security device positioned on the side opposite to the casement hinge and which comprises first and second elements,
the first carried by the casement and the second carried by the frame, which elements interengage in a direction normal to the plane of the frame when the casement is closed into the frame, whereby, in the closed condition,

65 the second element provides an abutment for

the first element preventing movement of the latter in the plane of the frame in the direction towards the hinge.

Fach element preferably includes a U-profile, the two U-profiles engaging one into the other as the casement is closed into the frame.

In the case of an espagnolette latch, the sliding bar moves over a face bar on the casement, and the first element may be fitted to this face bar. It may be so fitted using a single existing fixing hole provided in this face bar, and be formed with ledges, shoulders or the like which engage the longitudinal edges of the face bar to prevent the element from turning about the single screw fixing.

Brief description of drawings

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An example of casement security device in accordance with the invention will now be described with reference to the accompanying drawings, in which:—

Figure 1 is a cross-section through a closed casement equipped with an espagnolette latch and a security device in accordance with the 90 invention; and

Figure 2 is an exploded view showing the component parts of the security device.

Description of embodiment

95 In Fig. 1, reference 10 denotes a PVC casement profile, i.e. window or door, which closes into a PVC frame profile 12. The profiles shown are at the edge of the casement from its hinged edge. The casement closes,
100 about a hinge axis normal to the plane of the drawing, by movement from left to right into the frame.

In the closed condition, the casement latches by means of a conventional espagno105 lette latch, of which the sliding bar 15 is shown, together with the face bar 16 over which the bar 15 is slidable. The slotted fixed bar on the frame is not shown.

The security device in accordance with the 110 invention comprises a first element 13 which fits to the face bar 16 by means of a fixing screw 17, and a second element 14 which fits to the frame profile by means of fixing screws 18.

Fixing hole 20 in the face bar 16 is a conventionally provided fixing hole for the espagnolette latch, and the screw 17 screws through it in the direction shown, the sliding bar 15 being slotted to accommodate the end
of the screw. Element 13 is ledged, as indicated at 19, to engage the longitudinal edges of the face bar 16, thereby to prevent the element 13 from twisting about its single fix-

125 The first and second elements include U-profiles 21, 22, which interengage into one another when the casement is closed into the frame. The element 14 thus defines an abutment for the element 13, which prevents

130 movement of the edge of the casement, in

ing.

the closed condition, in the plane of the frame towards the remote hinge. Thus, levering the door to cause bowing thereof, which would otherwise spring the espagnolette latch, is effectively prevented.

Whilst particularly described above in relation to a PVC casement fitted with an espagnolette latch, with which the invention is especially useful, nevertheless the invention is not limited thereto and may be employed in connection with other types of casement fitted with other types of latch. It is to be noted, however, that the security device is necessarily an adjunct to the conventionally provided latch, because it does not in itself act to prevent opening of the casement by its normal hinged movement.

CLAIMS

- In or for a casement having a handle-operable latch, a security device positioned on the side opposite to the casement hinge and which comprises first and second elements, the first carried by the casement and the second carried by the frame, which elements interengage in a direction normal to the plane of the frame when the casement is closed into the frame, whereby, in the closed condition, the second element provides an abutment for the first element preventing movement of the latter in the plane of the frame in the direction towards the hinge.
- A security device for a casement as claimed in claim 1 wherein each element in cludes a U-profile, the two U-profiles engaging one into the other as the casement is closed into the frame.
- A security device as claimed in claim 1 when fitted to a casement having an espagno lette latch in which a sliding bar moves relative a face bar on the casement, and wherein the said first element is fitted to the said face bar.
- A security device as claimed in any of the preceding claims when fitted to a hinged casement window.
 - 5. A hinged closure member when fitted with a security device as claimed in any of claims 1 to 3.
- 6. A security device constructed arranged and adapted to operate substantially as herein described with reference to the accompanying drawings.

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