

"A Security Device"

This invention relates to a security device.

Due to an increased awareness of the need for greater security, devices have been developed which secure windows and like closures from being forced by unauthorized persons. These devices include stays which limit the extent to which a hinged window or like closure can be opened. Such stays can permit a window to be left open in an otherwise secure building yet still prevent the window from being opened sufficiently to enable an unauthorized person to enter the building.

A security device of this type is described and claimed in our EP patent specification 0010386. The device includes an elongate arm member which has a longitudinally extending slot. A headed pin is slidably located in the slot this pin being engaged with a mounting which is designed to be attached to the window frame. The arm is thus captured by the pin and its mount and is not releasable from the mount. The arm is in turn releasably attachable to the window sash. However, it could be permanently attached by one end to the sash.

It has been found that an intruder can apply a leverage to the slot in which the pin is slidably located to thereby widen the slot sufficiently to force the head of the pin through the slot. This results in the arm no longer being captured by its mount. Therefore the

intruder can open the window and gain access to the building.

The object of the present invention is to provide a security device of the type in which a headed fastener member is slidably located in a slot whereby even if the slot is deformed such deformation will not result in separation of the fastener from the arm member.

Broadly the present invention consists of a security device for use with a closure located within a frame said security device being of the type having an arm coupled to a mounting via a fastener, said fastener being slidably located in a slot in said arm, the mounting and arm being adapted for coupling to respective ones of the closure and the frame, the security device being characterized in that the fastener extends through a sleeve located about the arm and said arm is slidable relative to said sleeve.

In the more detailed description of a preferred form of the invention which follows reference will be made to the accompanying drawings in which:-

Figure 1 is a front perspective view of a security device of the type disclosed in EP patent specification 0010386 and incorporating the present invention,

Figure 2 is a rear perspective view,

Figure 3 is top plan view,

Figure 4 is a front view,

Figure 5 is an end view,

Figure 6 is an elevation view of a form of the housing,

Figure 7 is a plan view from A as shown in Figure 6, and

Figure 8 is a plan view from B in Figure 6.

The security device comprises an elongate arm 10. An enclosed elongate slot 11 is provided longitudinally of the arm. As disclosed in EP patent specification 0010386 the elongate slot 11 has a plurality of recesses 12 which provide stops which determine various degrees of openness of the closure mounted within the frame.

The arm has at one end, but preferably both ends, a hook shaped portion 13 which is engageable with a locking pin (not shown) of a mounting plate (also not shown) mountable with a closure such as a sash of a window.

A frame plate 14 of generally disc shape is provided with openings 15 whereby the frame plate 14 can be attached to the frame in which the closure is located. Anchored to and extending from plate 14 is a fastener in the form of a fixing pin 17 having an enlarged head 18 at its outer end. The fixing pin 17 thus extends through slot 11 and due to the presence of the enlarged

head 18 the arm is thereby slidably captured with fixing pin 17.

A housing 19 in the form of a sleeve is engaged about arm 10 and is dimensioned such that it closely engages about the arm yet still permits the arm to slidably move relative thereto. The cross-sectional shape of the interior of sleeve 19 thus conforms with the cross-sectional shape of arm 10. Fixing pin 17 extends through openings 20 formed in opposed walls 21 of sleeve 19. Openings 20 are slightly elongated or provided with recesses so as to permit lateral movement for pin 17 to engage in recesses 12 in arm 10. Accordingly arm 10 can slidably move relative to both the fixing pin 17 and sleeve 19.

As shown in the drawings the width of the wall 16 of the sleeve 19 is at least (but preferably greater) than the diameter of head 18.

Sleeve 19 can be pressed from metal sheet as shown in Figures 6 to 7. The elongating or profiling of openings 20 can be observed from Figure 7 and 8 where a rounded profile is formed at one end of the opening.

Consequently if an intruder endeavours to force apart the slot 11 the housing or sleeve 19 provides resistance to such action in the area where the fixing pin 17 extends through the slot. In the event that the

intruder does succeed in widening the slot the presence of the sleeve ensures that the enlarged head 18 of the fixing pin 17 cannot be forced through slot 11. It will be appreciated that the openings 20 in the walls 21 of sleeve 19 are only just slightly greater in width than the diameter of fixing pin 17 with the result that they are of considerably less width than the greatest cross-sectional diameter of head 18.

The presence of the housing 19 therefore greatly enhances the integrity of the device and hence the degree of security it provides. Thus while the presence of sleeve 19 may not prevent some widening of the slot from taking place it does prevent widening of the slot in the area of vulnerability immediately adjacent the place where the fixing pin 17 extends through the arm 10.



CLAIMS:

1. A security device for use with a closure located within a frame said security device being of the type having an arm coupled to a mounting via a fastener, said fastener being slidably located in a slot in said arm, the mounting and arm being adapted for coupling to respective ones of the closure and the frame, the security device being characterized in that the fastener extends through a sleeve located about the arm and said arm is slidable relative to said sleeve.
2. A security device as claimed in Claim 1 wherein the sleeve has an internal cross-sectional shape which corresponds to the cross-sectional shape of the arm.
3. A security device as claimed in Claim 1 or 2 wherein the fastener comprises a fixing pin anchored at one end to said mounting and having at its other end an enlarged head.
4. A security device as claimed in Claim 3 wherein the sleeve has opposed openings through which said pin extends, the width of the said openings being less than the greatest cross-sectional dimension of the enlarged head.



5. A security device as claimed in Claim 3 or 4 wherein the wall of the sleeve adjacent said head is at least as wide as the greatest cross-section dimension of the head.

6. A security device as claimed in any one of the preceding Claims wherein the slot is elongate and has a plurality of recesses located in at least one wall thereof.

7. A security device substantially as herein described with reference to the accompanying drawings.