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(56) Documents Cited
GB 2160257 A EP 0467728 A WO 96/23125 A

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(54) Apparatus for locating a support track of a stay

(57) Apparatus is provided for locating a support track of a stay in a channel formed in a frame of an opening. More specifically the apparatus is intended for use with support tracks formed with upper inwardly turned walls. The apparatus comprises two locating members attached to the support track at spaced positions thereon. The first locating member 46 may be attached to the support track by a spigot 52 push-fitted into an aperture in the support track. The second locating member (48, figure 5) may be removably attached to one end of the support track by a pair of lugs (66, figure 5) push-fitted under the upper inwardly turned walls of the support track. Both locating members include downwardly projecting elongate blocks adapted to engage the channel of the frame.

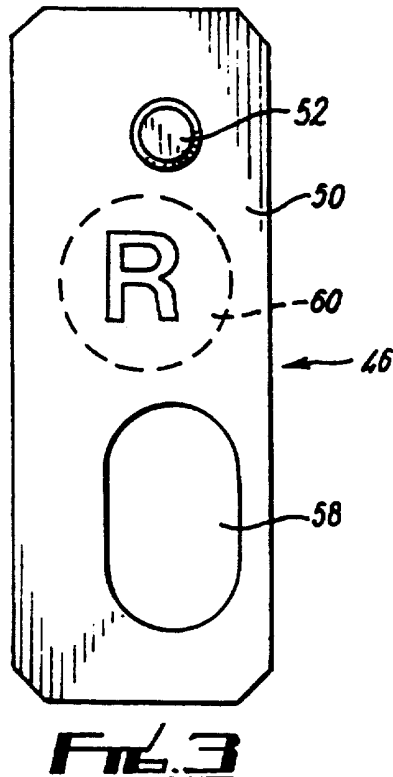


FIG. 3

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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 1995

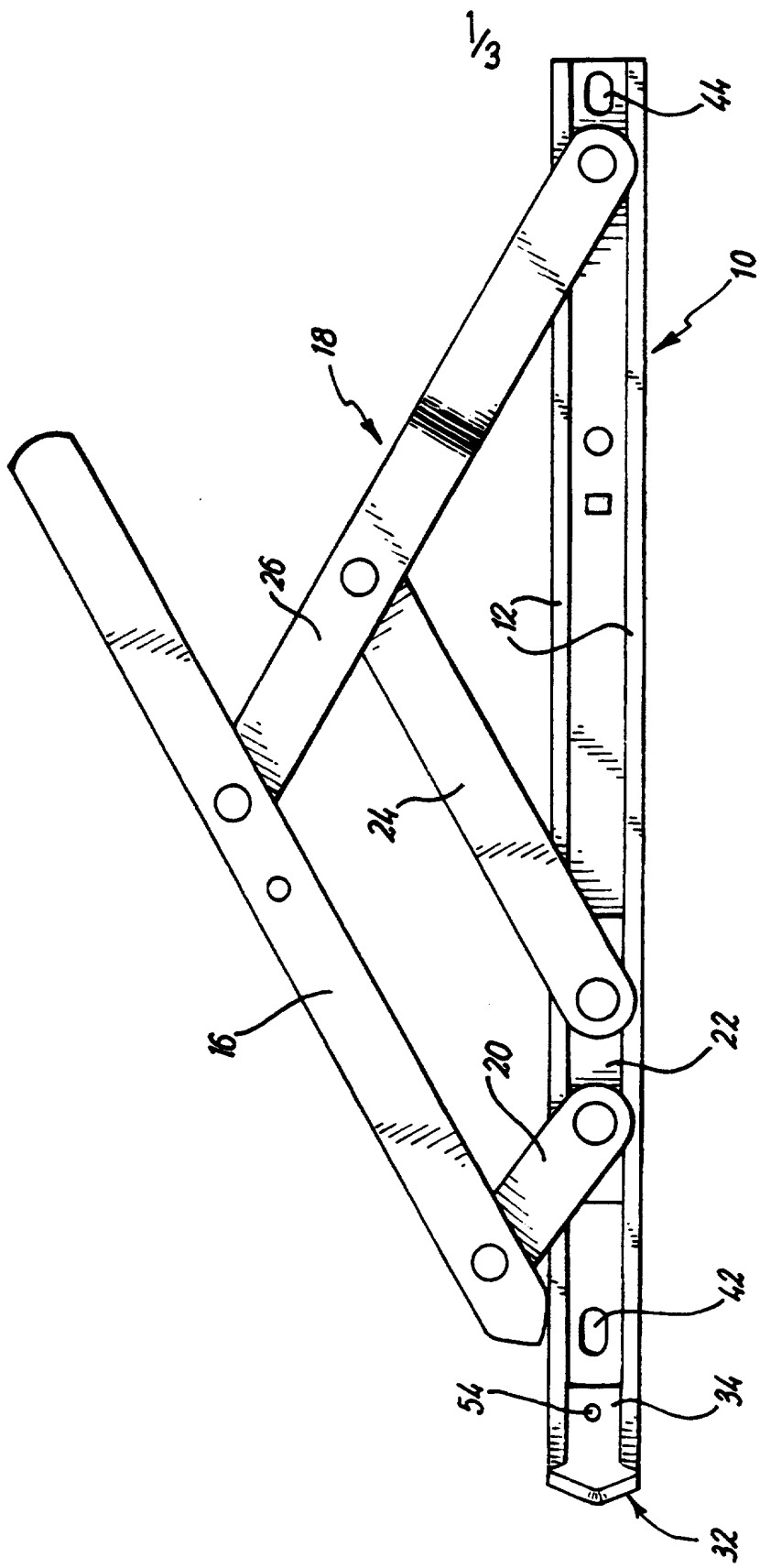


Fig. 1

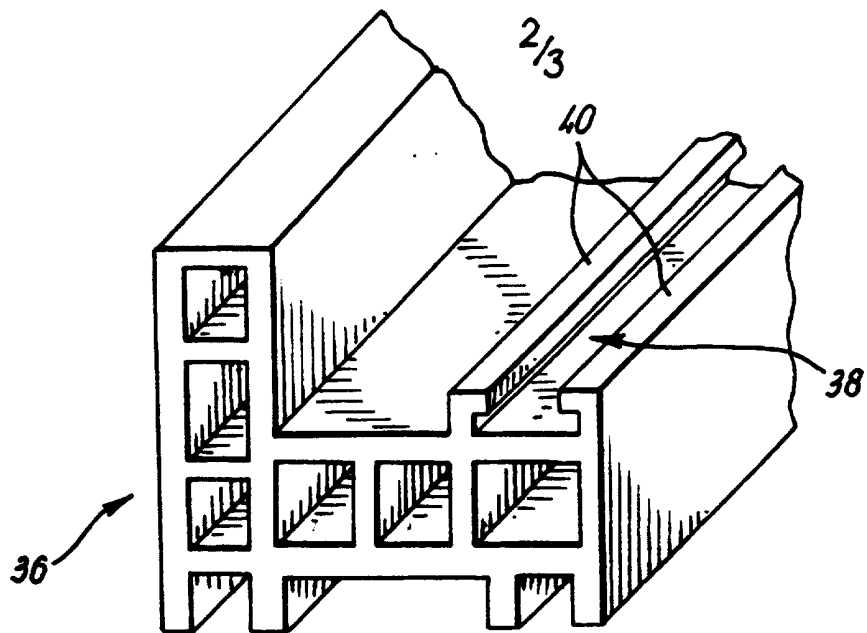


FIG. 2

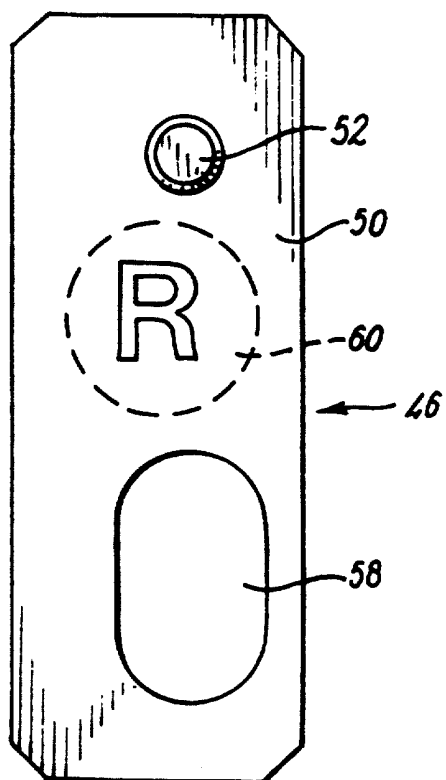


FIG. 3

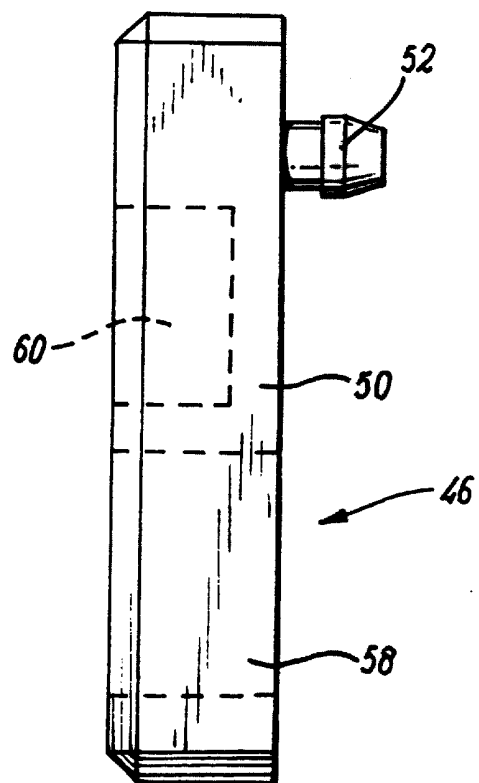


FIG. 4

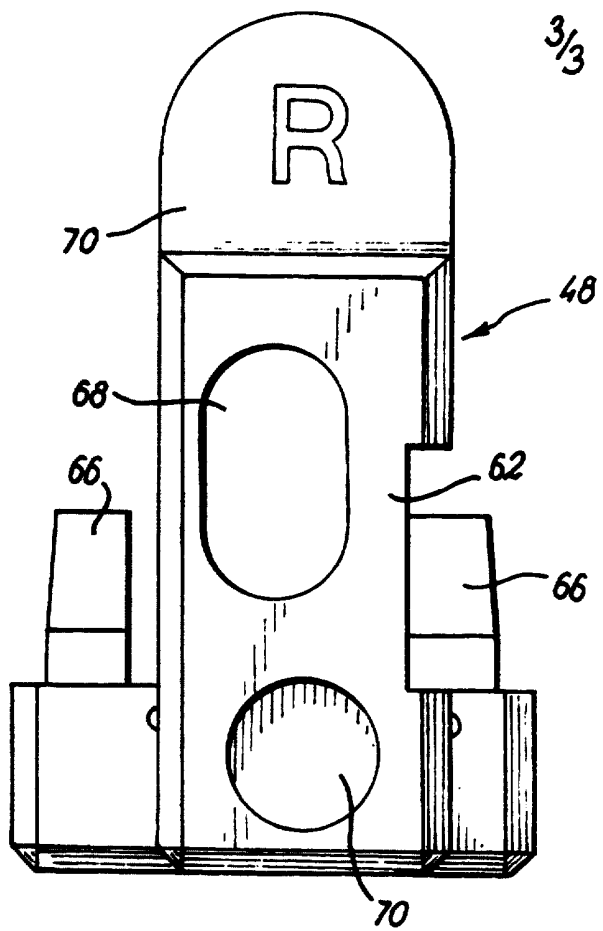


FIG. 5

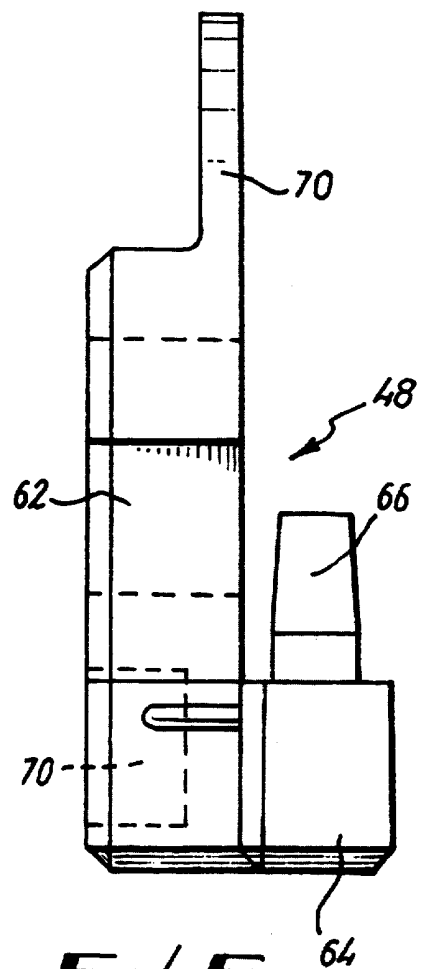


FIG. 6

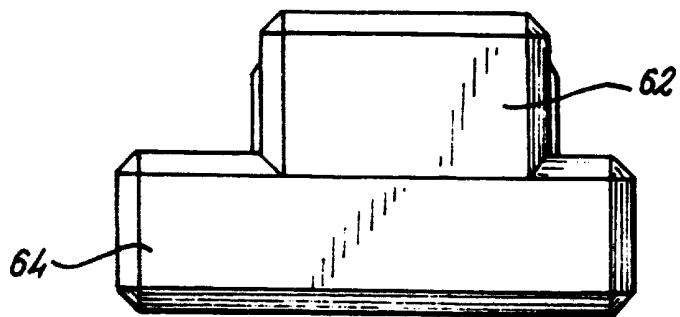


FIG. 7

Improvements in or Relating to Window Supports

This invention is concerned with a component arrangement for use with apparatus for supporting a component for movement between an open and a closed position in the fixture opening, and is particularly concerned with a component arrangement for use in locating a window support apparatus in the fixture opening.

In a known window support apparatus, the window is pivotable about either a vertical or horizontal axis and the axis of pivoting of the window moves away from the window frame, so that when the window is opened, both sides thereof are accessible from one side of the window frame. Such apparatus may comprise a first member which mounts the window, and a link arrangement for pivotally mounting the first member on a track attached to the window frame. In a known design of the latter, there is provided an open-topped channel through which the track is normally secured to the respective window frame part by screws extending through mounting holes provided in the base of the track and through the channel.

It is an object of the present invention to improve the locating of such window support apparatus on the window frame.

According to the present invention there is provided an arrangement for locating, on a frame part of a fixture opening, an apparatus for supporting a component for movement between an open and a closed position in the fixture opening, the apparatus comprising an arrangement having a first member for mounting the component and a second member adapted to be secured to the frame part of the fixture opening by way of an open-topped channel thereon, the arrangement comprising first and second locating means adapted to be removably mounted on the second member at spaced positions thereon, each locating means being further adapted to engage in the channel of the frame part for correct location of the second member on the frame part prior to

securing thereto.

Preferably the first locating means comprises an elongate block having a width dimension enabling the block to engage in the channel through the open top thereof, the block having a spigot upstanding from one face thereof, the spigot being dimensioned to be a push-fit in an aperture in the second member, whereby the block can be removably mounted on a lower side of the second member to locate the latter relative to the channel. The elongate block may be formed of a moulded plastics material, and the block may have material removed from one or more areas thereof to reduce the amount of material used in manufacture. The block may be mounted on the second member to extend below a fixing hole therein, the block thereby being provided with a through aperture to be aligned with the fixing hole.

Preferably also, the second locating means comprises a block having a width dimension to enable the block to locate in the channel through the open top thereof, the block being adapted to be removably mounted on an open-topped channel of the second member having inturned upper walls. The block preferably is provided at one end thereof with an upstanding part presenting a pair of spaced locating lugs which extend in the direction of the block but are spaced thereabove, whereby the lugs can locate into one end of the channel of the second member with the lugs under the respective inturned upper walls thereof, and the block locating below the base thereof. The block and the upstanding part may be integrally formed of a moulded plastics material. The block may be provided with a through aperture which can align with a mounting hole in the base of the channel of the second member. The lugs may be a push-fit into the channel of the second member.

The invention also provides apparatus for supporting a component for movement between an open and a closed position in a fixture opening, the apparatus having an arrangement as described in any of the three preceding paragraphs.

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

Fig. 1 is a top plan view of window support apparatus shown in partly open position;

Fig. 2 is a perspective view from one end of a window frame part;

Fig. 3 is a top plan view of a first locating component for the apparatus of Fig. 1;

Fig. 4 is a side view of the component of Fig. 3;

Fig. 5 is a bottom plan view of a second locating component;

Fig. 6 is a side view of the component of Fig. 5;

Fig. 7 is an end view of the component of Figs. 5 and 6.

Referring to Figs. 1 and 2 of the drawings, a window support apparatus in the form of a friction stay comprises an open-topped track 10 having inturned upper walls 12, the track 10 being adapted to be fixed on a lower horizontal part 36 of a window frame by means of any suitable fixing devices engaged through apertures in the base of the track 10 as hereinafter described. A further track (not shown) is inverted and secured to a horizontal upper part of the window frame.

A window sash (not shown) is fixed at each of opposed edges to a respective elongate member 16 forming part of a link arrangement. The member 16, at a location intermediate of its ends is pivotally mounted on one end of an elongate link 18, the other end of which is pivotally mounted on the track 10 towards one end thereof. At one end thereof the support member 16 is pivotally mounted on one end of a link 20, the other end of the latter being pivotally mounted on a slider 22 which is slidably located in the track 10. The slider 22 also pivotally mounts one end of a further link 24, the other end of which is pivotally mounted on the link 18. The latter is stepped along its length to provide a raised section 26 on which the link 24 is mounted, so as to provide clearance for the link 24 in the closed position.

At one end, the track 10 is closed by a member 32 which has a mounting

part 34 overlying an end part of the base of the track 10 below the walls 12. The member 32 is secured in position by crimping of the walls 12 and the mounting part 34.

The window frame part 36, preferably formed of an extruded plastics material, provides an open-topped channel 38 with intumed upper walls 40, the track 10 being adapted to be mounted on the window frame on the channel 38 by way of fixing screws (not shown) through fixing holes 42, 44 in the base of the track 10 and through the channel 38 into the window frame part 36.

For correct positioning of the track 10 prior to securing of the latter on to the window frame part 36, a first locating component 42 (Figs. 3 and 4) is removably mounted on the underside of the track 10 at the end thereof closed by the member 32, while a second component 48 (Figs. 5 to 7) is removably mounted on the underside of the opposed end of the track 10.

The component 46 has the form of an elongate block 50, preferably formed of a moulded plastics material, and having a width dimension enabling the block 50 to locate in the channel 38 of the frame part 36 through the open top thereof. The block 50 provides an upstanding spigot 52 which is a push-fit within an existing tooling hole 54 in the base of the track 10, an aligned hole being formed in the mounting part 34 of the member 32. The block 50 can therefore be push-fitted onto the underside of the track 10 to locate the latter in the channel 38. As the block 50 underlies the fixing hole 42 in the base of the track 10, the block 50 is provided with a corresponding through aperture 58 which aligns with the mounting hole 42 to enable securing of the track 10 to the frame part 36. To reduce the amount of material used, the block 50 is also provided with a recess 60 on its underside.

The component 48 (Figs. 5 to 7) is preferably formed of a moulded plastics material and provides a block 62, also of a width dimension to enable the block to locate in the channel 38 of the frame part 36 through the open top thereof. At one end, the block 62 has an upstanding part 64 of a width

corresponding to the width of the track 10, and presenting a pair of spaced lugs 66 extending in a direction over the block 62 but spaced thereabove. For mounting on the track 10, the lugs 66 locate into the end of the track 10 remote from the member 32 to push fit below the respective walls 12 thereof, the base of the track 10 locating between the lugs 66 and the block 62, whereby the latter locates below the track 10 and the end of the upstanding part 64 effectively closes the end of the track 10. As the block 62 underlies the fixing hole 44 in the base of the track 10, a corresponding through aperture 68 is formed in the block 62 to align with the hole 44 and enable a fixing screw to pass through for securing of the track 10 to the frame part 36. To reduce the amount of material used, the block 62 is also provided with a recess 70 or its underside.

As shown in the drawings, respective edges of the components 46 and 48 are chamfered. The component 46 may be formed with an imprint of the letter R or L to indicate that the respective component can be used with a right handed or left handed friction stay respectively. The block 62 of the component 48 is provided with an extension tab 70 which can also be imprinted with the letter R or L for a similar purpose. It is envisaged that the components 46, 48 may be supplied in a pack for both right and left handed stays, with the respective components being moulded onto a carrying component which can provide for breaking off of those components requiring use for a particular friction stay.

There is therefore provided a simple yet effective locating arrangement for friction stays on a window frame of the type providing open-topped channels into which the tracks of the window stays are to be mounted. The components can be supplied for use with existing designs of friction stay because they are removably mounted thereon. It will be appreciated that the friction stay described and shown is by way of example only and that the locating components may be usable with other designs of friction stays.

Various modifications may be made without departing from the invention. For example the configuration of the locating components may differ

from that described and shown, and they may be made from other materials.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims-

1. An arrangement for locating, on a frame part of a fixture opening, an apparatus for supporting a component for movement between an open and a closed position in the fixture opening, the apparatus having a first member for mounting the component and a second member adapted to be secured to the frame part of the fixture opening by way of an open-topped channel thereon, the arrangement comprising first and second locating means adapted to be mounted on the second member at spaced positions thereon, each locating means being further adapted to engage in the channel of the frame part for correct location of the second member on the frame part prior to securing thereto.
2. An arrangement according to Claim 1, wherein the first locating means comprises an elongate block having a width dimension enabling the block to engage in the channel through the open top thereof, the block having a spigot upstanding from one face thereof, the spigot being dimensioned to be a push-fit in an aperture in the second member, whereby the block can be mounted on a lower side of the second member to locate the latter relative to the channel.
3. An arrangement according to Claim 2, wherein the elongate block is formed of a moulded plastics material.
4. An arrangement according to Claim 2 or 3, wherein the elongate block has material removed from one or more areas thereof to reduce the amount of material used in manufacture.
5. An arrangement according to any of Claims 2 to 4, wherein the elongate block is adapted to be mounted on the second member to extend below a fixing hole therein, the block thereby being provided with a through aperture to be aligned with the fixing hole.

6. An arrangement according to any of the preceding Claims, wherein the second locating means comprises a block having a width dimension to enable the block to locate in the channel through the open top thereof, the block being adapted to be removably mounted on an open-topped channel of the second member having inturned upper walls.

7. An arrangement according to Claim 6, wherein the block is provided at one end thereof with an upstanding part presenting a pair of spaced locating lugs which extend in the direction of the block but are spaced thereabove, whereby the lugs can locate into one end of the channel of the second member with the lugs under the respective inturned upper walls thereof, and the block locating below the base thereof.

8. An arrangement according to Claim 7, wherein the lugs are a push-fit into the channel of the second member.

9. An arrangement according to Claim 7 or 8, wherein the block and the upstanding part are each integrally formed of a moulded plastics material.

10. An arrangement according to any of Claims 7 to 9, wherein the block is provided with a through aperture which can align with a mounting hole in the base of the channel of the second member.

11. Apparatus for supporting a component for movement between an open and a closed position in a fixture opening, the apparatus having an arrangement according to any of the preceding Claims.

12. An arrangement substantially as hereinbefore described with reference to the accompanying drawings.

13. Apparatus for supporting a component for movement between an open and a closed position in a fixture opening substantially as hereinbefore described with reference to the accompanying drawings.

14. Any novel subject matter or combination including novel subject matter disclosed, whether or not within the scope of or relating to the same invention as any of the preceding claims.



Application No: GB 9608151.8
Claims searched: 1-13

Examiner: Martin Holt Riley
Date of search: 4 July 1997

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.O): E2F (FAD, FSQ)

Int CI (Ed.6): E05D 15/30, 15/42, 15/44

Other: Online: WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2160257 A (RHODEN) - see whole document	1
A	EP 0467728 A (BEZAULT) - see column 4, lines 2-8 and figure 8	-
A,E	WO 96/23125 A (INTERLOCK) - see page 6, lines 15-16; page 7, line 25 to page 8, line 12; page 9, lines 6-10 and figure 6.	-

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.