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(54) **Fixing means for a window panel.**

(57) A fixing means for a window panel (1) comprises a pair of brackets (5a,5b) slidably provided in a channel (4) around the periphery of a window panel and a fixing bar (9) extending between the brackets, one of the brackets being provided in the channel on the X-axis of the panel and the other of the brackets being provided on the Y-axis of the panel at all times.

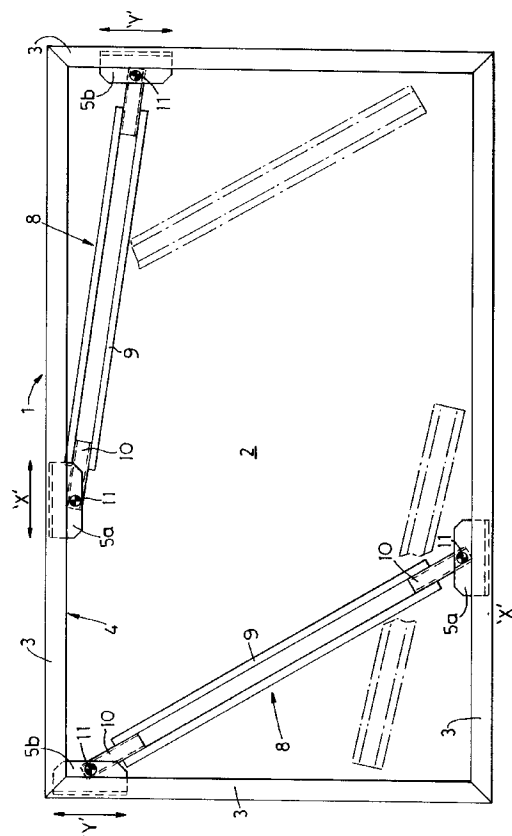


Fig. 1

This invention relates to a fixing means and more particularly to a fixing means for a window panel.

Window security panels are mounted over a window or opening of a property in order to secure the property against unauthorised access. The window panels are either mounted over the window or alternatively, mounted in the window recess. The panel is held in position by a number of fixing means which grip the panel and pass through the window opening and are captively retained on the inside of the window. The fixings are arranged on either the X-X axis or the Y-Y axis which enable vandals to prise the panels off the wall of the building and gain access to the property.

The present invention aims to overcome or at least mitigate the disadvantages associated with the above fixings.

According to one aspect of the present invention there is provided a fixing means for a window panel, the fixing means comprising a pair of brackets slidably provided in a channel around the periphery of a window panel and a fixing bar pivotally extending between the brackets, one of the brackets being provided in the channel on the X-axis of the panel and the other of the brackets being provided on the Y-axis of the panel at all times.

One embodiment of the present invention will now be described by way of example only in which:

Figure 1 is a schematic view of a fixing means according to one aspect of the present invention;

Figure 2 is an enlarged view of a portion of Figure 1;

Figure 3 is a side view of the detail of Figure 2.

Figure 4 is a schematic view of a fixing means according to a further aspect of the present invention;

Figure 5 is an enlarged view of a portion of Figure 4, and

Figure 6 is a side view of the detail of Figure 5.

Turning now to Figures 1 to 3 there is shown a security window panel 1 which is intended in use to be mounted over a window or alternatively mounted in the window recess of a building to prevent unauthorised access into the building. Figure 1 shows the window panel 1 from inside the building. The panel comprises a substantially rectangular face 2 having four intumed edges 3 defining a channel 4 around the periphery of the panel 1.

A retaining bracket 5 is provided on each side of the panel 1. The retaining brackets 5 are held captive within the channel 4 defined by the intumed edges 3 and are slideable within the channel 4. Each bracket 5 comprises a first L-shaped member 6 mounted adjacent a second L-shaped member 7. One leg 6a,7a of each L-shaped member is retained within the channel 4 and the other leg 6b,7b of each member lies parallel to the rectangular face 2 of the panel 1.

The panel 1 is held in position by a plurality of fix-

ing means 8 each comprising a hollow position adjustable rod 9 extending between a pair of the retaining brackets 5. Each rod 9 is mounted on the brackets 5 by a holding bar 10 which extends between the rod 9 and the brackets 5. The holding bars 10 are inserted between the legs 6b,7b of the two L-shaped members of the brackets 5 and held captive by a pivot pin 11 which extends through corresponding apertures in the holding bar 10 and the L-shaped members 6,7 of the brackets 5.

In use of the panel, the panel 1 is mounted over a window opening or in the window recess of a building in the usual way. Each fixing means 8 is attached to the panel 1 as shown in Figure 1 so that each rod 9 extends between one bracket 5a mounted on the X axis of the panel 1 and one bracket 5b mounted on the Y axis of the axis of the panel 1.

In order to adjust the position of the rods 9, the brackets 5a,5b are slid along the channel 4 of the panel 1 to the required position. As the bracket 5a on the X axis is adjusted, the corresponding bracket 5b on the Y axis is automatically adjusted. The holding bars 10 provided at either ends of each rod 9 pivot about the pivot pins 11 as the brackets 5a,5b are repositioned along the channel 4.

As can be seen the panel 1 is held on all four sides at all times by only two rods 9. It will be appreciated that no side of the panel is unsupported by the fixing rods 9 and therefore it is more difficult to prise the panel from the wall as the available points for leverage are reduced. Furthermore, the rods can be set in any position between the two extremes shown in Figure 1 and can be set at the site prior to fixing.

A further embodiment of the present invention is shown in Figures 4 to 6 in which the brackets are slidably received in a channel of a guide rail mounted adjacent to the channel surrounding the periphery of the panel. The guide rail is formed of a moulded section open along one side to allow for sliding of the brackets within the channel of the guide rail. The brackets are mounted to the rods in a similar manner to that described above with reference to Figures 1 to 3.

It will be appreciated that if someone were to succeed in hooking a lever under the intumed edge of the panel in order to prise the panel from the wall of the building, the panel will be caused to bend at the joint between the face of the panel and the guide rail. However, the panel will be retained in position by the fixing means which is concealed within the guide rail and cannot be tampered with from outside the building.

It is to be appreciated that the rods can be used to fit any size of window panel.

Claims

1. A fixing means for a window panel, the fixing means comprising a pair of brackets slidably provided in a channel around the periphery of a window panel and a fixing bar extending between the brackets, one of the brackets being provided in the channel on the X-axis of the panel and the other of the brackets being provided on the Y-axis of the panel at all times. 5
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2. A fixing means according to claim 1, wherein the fixing bar is pivotally mounted on each of the brackets to allow the brackets to be repositioned in the channel. 15
3. A fixing means according to claim 2, wherein the fixing bar is a hollow rod mounted on the brackets through a pivot pin. 20
4. A fixing means for a window panel substantially as hereinbefore described with reference to and as shown in Figures 1-3 of the accompanying drawings.. 25
5. A fixing means for a window panel substantially as hereinbefore described with reference to and as shown in Figures 4-6 of the accompanying drawings.. 30

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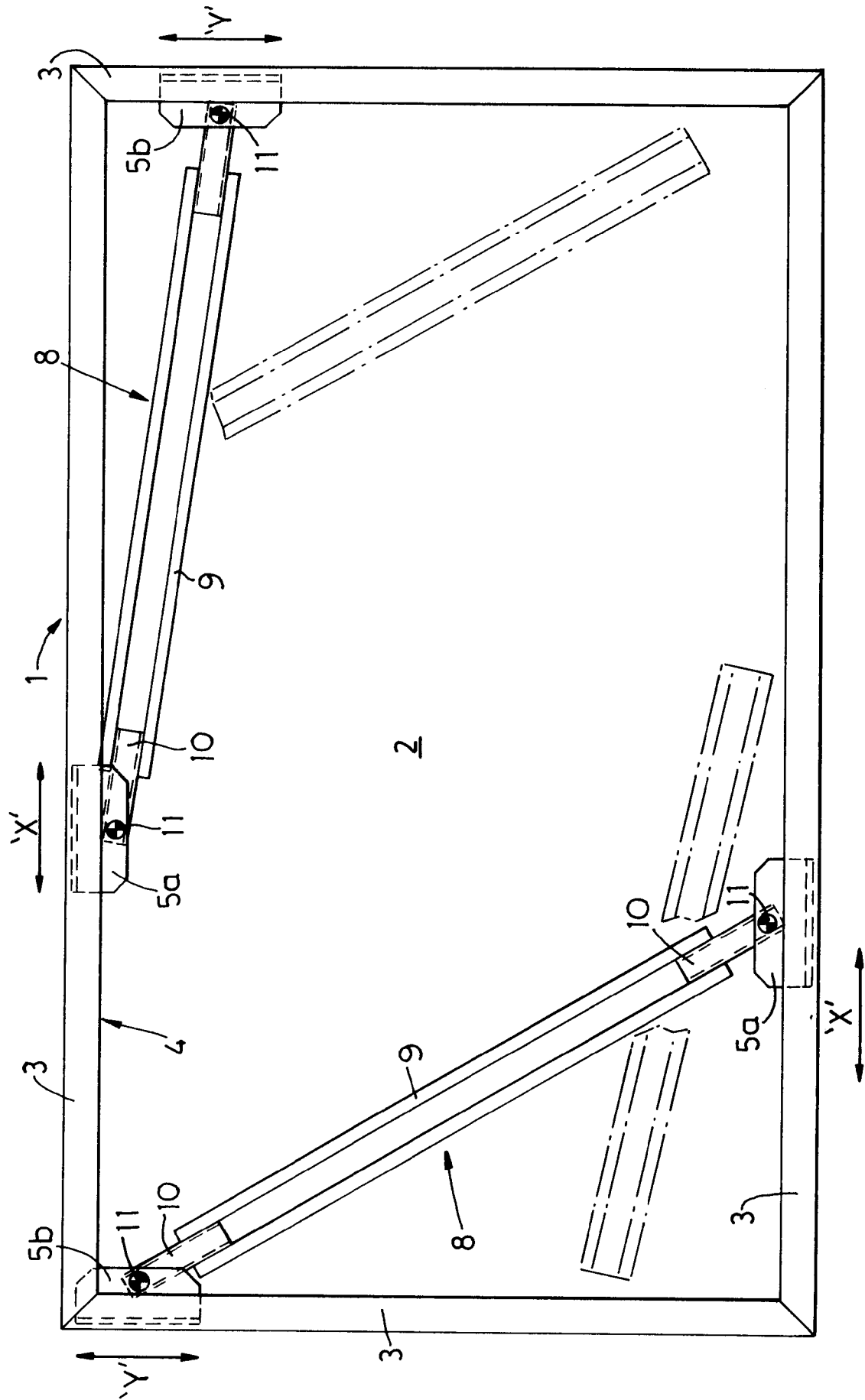


Fig. 1

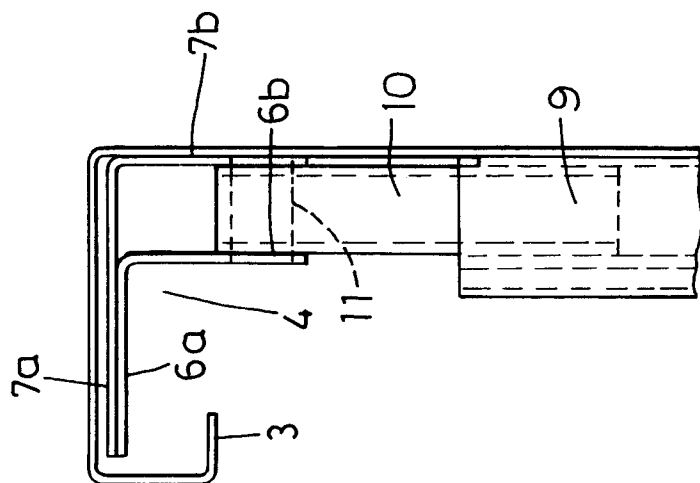


Fig. 2

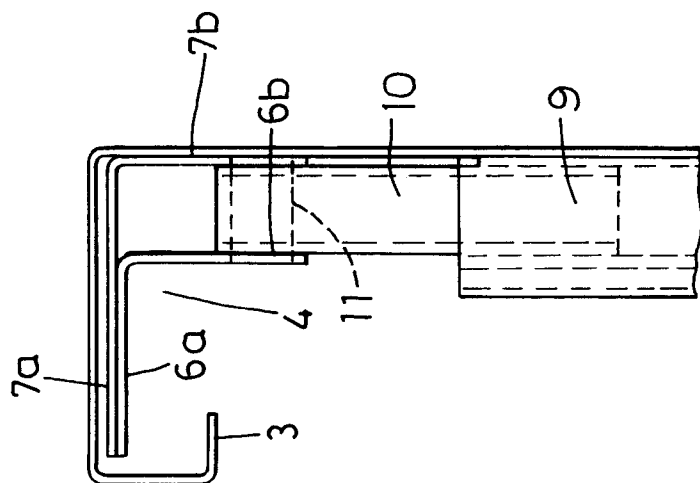
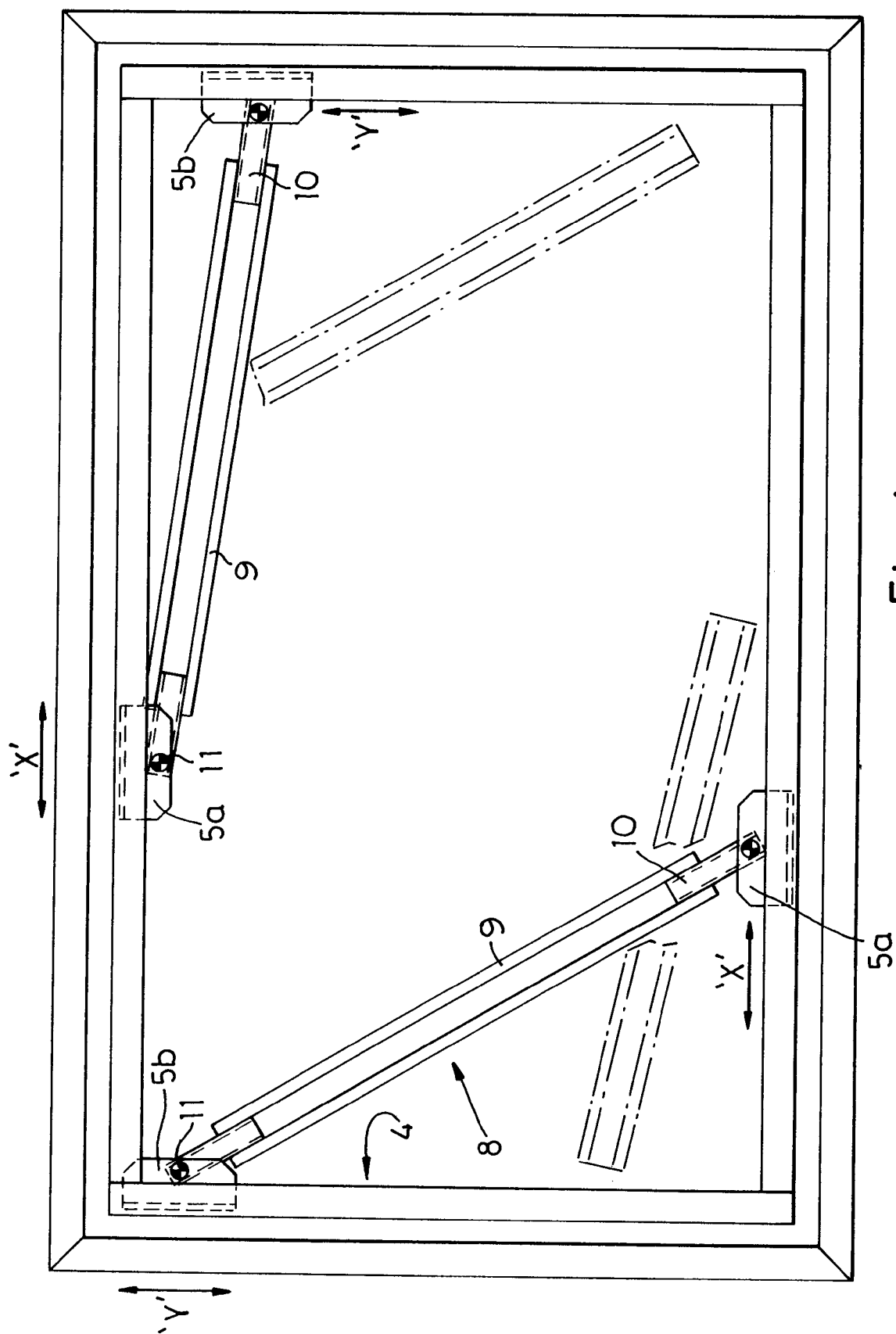


Fig. 3



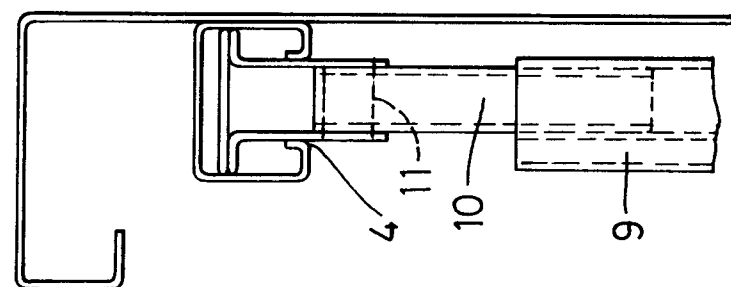


Fig. 6

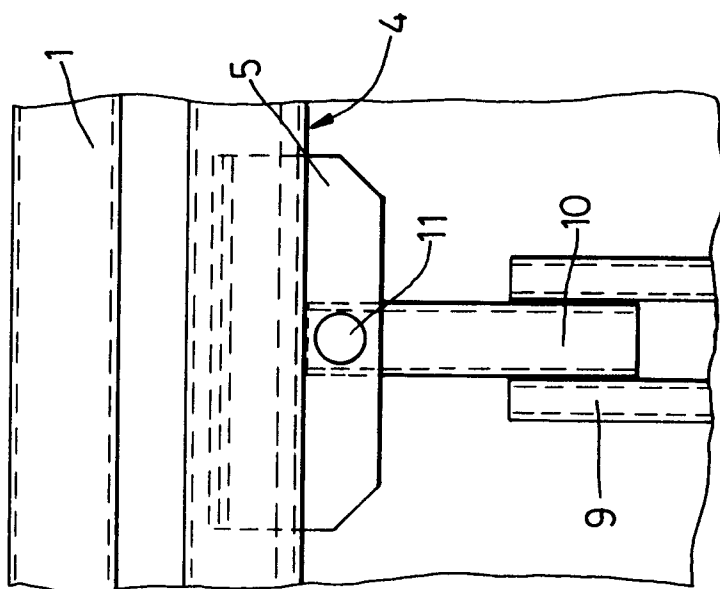


Fig. 5



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 93 31 0447

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
A	US-A-4 432 162 (FOOTE) * the whole document * ---	1-5	E06B9/01 E06B9/52
A	US-A-1 561 470 (KIHM) * the whole document * ---	1-5	
A	DE-U-91 02 592 (HAUSTEIN) * the whole document * ---	1-5	
A	US-A-1 393 616 (FOSTER) * the whole document * -----	1-5	
			TECHNICAL FIELDS SEARCHED (Int.Cl.5)
			E06B E04G
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 8 April 1994	Examiner Kukidis, S
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