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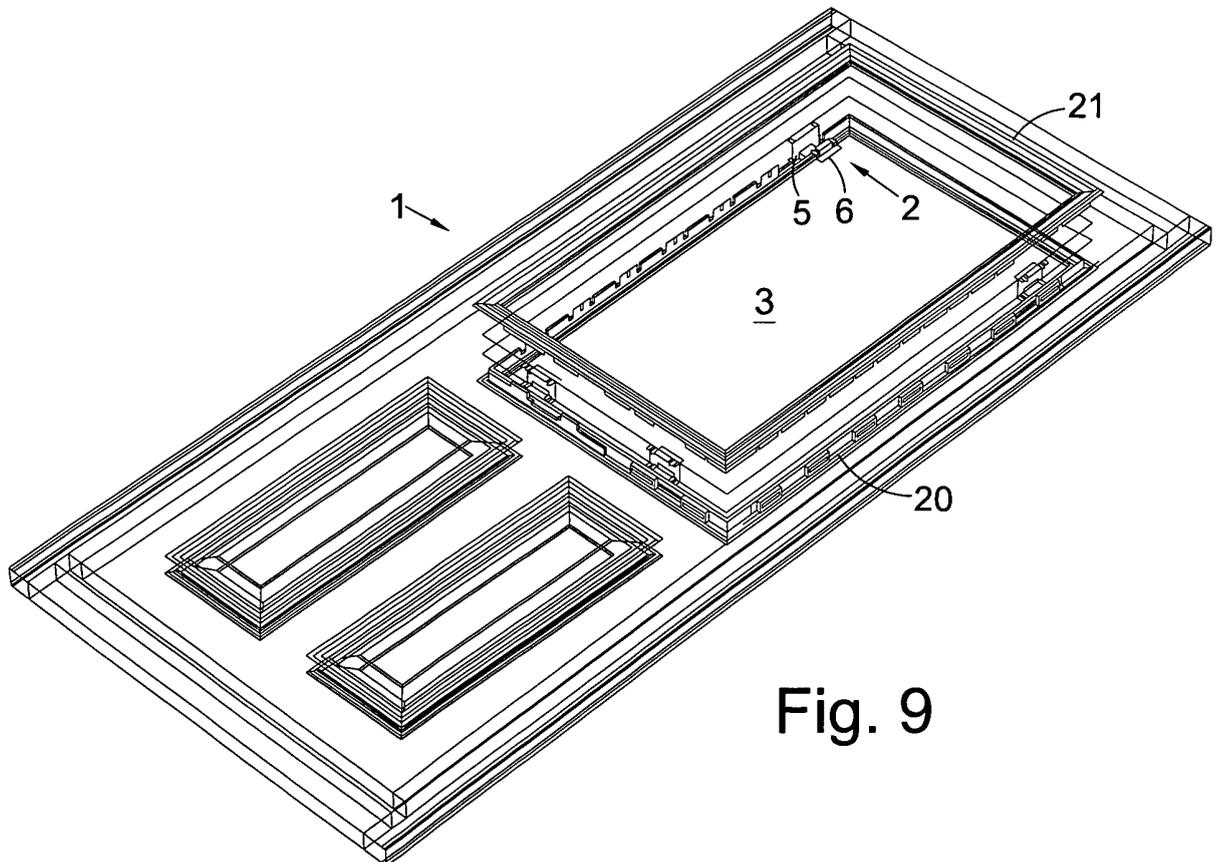
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**(54) Improvements in doors**

(57) A set of parts (2) for assembly with a door (1) for mounting a window light in an opening (3) of the door (1). The set of parts (2) comprises a first bracket part (5)

for securing to the door (1) and a second bracket part (6) for assembly with the first bracket part (5) to define a seating for a window light.



**Fig. 9**

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## Description

**[0001]** The invention relates to improvements in doors, particularly in doors which include a window light.

**[0002]** By window light is meant a window of glass, plastic or other transparent or translucent material which is mounted in an opening of a door. The window light may be of a single, or of a multi-layer, construction.

**[0003]** The door may be a wooden door, or of any other suitable material such as plastic or a combination of suitable materials.

**[0004]** Whatever the construction of the door, it is necessary that the window light be firmly and securely mounted therein, particularly when the door is a fire door. In the past, window lights have been mounted in an opening in a door using a plethora of mounts, each of which requires the use of securing means such as screws to be screwed into the fabric of the door. This can weaken the structure, and is in any event unsightly.

**[0005]** It is accordingly an object of the invention to seek to mitigate these disadvantages.

**[0006]** According to a first aspect of the invention there is provided a set of parts for assembly with a door for mounting a window light in an opening in the door, comprising a first bracket part for securing to the door and a second bracket part for assembly with the first bracket part to define a seating for a window light.

**[0007]** Using the invention it is possible to provide for mounting a window light without the need to screw screws into the door.

**[0008]** The first and second bracket parts may each comprise a flange which when the parts are assembled are substantially parallel and spaced apart to define the seating therebetween. This provides a relatively simple construction in which the window light may be mounted.

**[0009]** The first bracket part may have a main body part which when assembled with a door, extends over a boundary of the opening and which has projections extending from the main boundary part to embrace the door. This provides a positive securing of the assembled set of parts.

**[0010]** The main body part may have seatings for receiving mountings of the second bracket part. This provides for an integrated assembly of the two bracket parts, particularly when the second bracket part may be of substantially Z-shape and may have a part which is adapted to embrace the door between the projections of the first bracket part.

**[0011]** The first bracket part may also comprise support means for entering the fabric of a door surrounding the opening. These support means are in use hidden so that there is no adverse aesthetic effect.

**[0012]** There may be an eject frame adapted to eject the window light in case of fire, or removal for replacement if a window light is damaged or is required to be changed.

**[0013]** The bracket parts may be made of metal, particularly iron.

**[0014]** According to a second aspect of the invention there is provided a door including an opening for mounting a window light, and a set of parts as hereinbefore defined assembled to define a seating for the window light.

**[0015]** There may be a plurality, suitably four, spaced apart assembled sets of parts.

**[0016]** The window light may comprise a single or multi-pane window.

**[0017]** The door may be made of wood, and may suitably be a fire door.

**[0018]** A set of parts and a door embodying the invention are hereinafter described, by way of example, in the accompanying schematic drawings.

**[0019]** Figs. 1 to 4 show respectively first and second bracket parts for assembly with a door for mounting a window light in an opening in the door, Fig. 1 showing end elevational views of the first and second bracket parts from one elevation, Fig. 2 the first and second bracket parts from an elevation opposite to that of Fig. 1, Fig. 3 an elevational view of the first bracket part mounted on a door and Fig. 4 the first and second bracket parts assembled together to define a seating for a window light;

**[0020]** Fig. 5A and 5B show eight steps in assembly of the bracket parts on a surrounding of an opening in the door in which the window light is to be mounted;

**[0021]** Fig. 6 shows an elevational view of a door embodying the invention;

**[0022]** Fig. 7 shows a section through the door of Fig. 6;

**[0023]** Fig. 8 shows an enlarged view of the mounting of the window light in the opening; and

**[0024]** Fig. 9 shows an exploded view of a door according to the invention.

**[0025]** Referring to the drawings, there is shown a door 1 such as a fire door (though this is optional, the door may not be a fire door) and a set of parts 2 for assembly with the door 1 for mounting a window light 3 in an opening 4 in the door 1, comprising a first bracket part 5 for securing to the door 1 and a second bracket part 6 for assembly with the first bracket part 5 to define a seating 7 for a window light.

**[0026]** Both bracket parts 5, 6 are made of metal, such as iron, and are formed from metal plate. The first bracket part 5 has a body 8 which in use flanks part of the door surrounding the opening. Projecting from the bottom in use and as viewed of the body is a flange 9 which forms one part of the seating 7. The top of the body 8 has projections or legs 10 which embrace part of the door surrounding the opening 3, and there are lower equivalent projections or legs 11 so that in use the legs 10, 11 embrace the door part surrounding the opening 3. There are also rearwardly (in a direction away from the opening) spikes or projections forming support means 12 which have a pointed end 13 and are inserted into the door, suitably in slots 14 therein. The second bracket part 6 is of substantially Z-shape and has a lower flange 15 which projects from a body 16 to be spaced from and to be substantially parallel to the flange 9 to define the seating

7. A flange 17 embraces the door 1 between the projections 10, and there are projections 18 with pointed ends 19 which engage the door fabric through slots 20 in the body 8 of the first bracket part 5. The assembled set of parts, as shown in Figs. 4, 6, 7, 8 and 9 is thus a first, composite unit which requires no screws to fix it to the door.

**[0027]** As shown in Figs. 5A and 5B, the first bracket part 5 is mounted on the door, "1", "2", a first finish surround, trim or eject frame 20 is then mounted on one side of the door, "3", "4", the second bracket part 6 is then assembled with the first bracket part "5", "6", and a second finish surround, trim or eject frame 21 is then assembled "7", "8" to provide a complete mounting at the opening and in which the window light is mounted. There are as shown in Fig. 6, four assembled sets of parts 2 which do not require the use of screws, or other fixing means and as there are only four sets, the cost is reduced.

**[0028]** The eject trim 20, 21 covers the edge of the opening 3 for an aesthetic effect, and covers up the edge of the surround, including any openings spaced therealong for receiving the projections.

#### Claims

1. A set of parts for assembly with a door for mounting a window light in an opening in the door, comprising a first bracket part for securing to the door and a second bracket part for assembly with the first bracket part to define a seating for a window light. 30
2. A set according to Claim 1, the first and second bracket parts each comprising a flange which when the parts are assembled are substantially parallel and spaced apart to define the seating therebetween. 35
3. A set according to Claim 2, the first bracket part having a main body part which when assembled with a door, extends over a boundary of the opening and which has projections extending from the main boundary part to embrace the door. 40
4. A set according to Claim 3, the main body part having seatings for receiving mountings of the second bracket part. 45
5. A set according to Claim 4, the second bracket part being of substantially Z-shape and having a part which is adapted to embrace the door between the projections of the first bracket part. 50
6. A set according to Claim 4 or Claim 5, the first bracket part also comprising support means for entering the fabric of a door surrounding the opening. 55
7. A set according to any preceding claim, including an eject frame adapted to eject the window light.
8. A set according to any preceding claim, the bracket parts being made of metal. 5
9. A door including an opening for mounting a window light, and a set of parts according to any preceding claim assembled to define a seating for the window light. 10
10. A door according to Claim 9, in which there is a plurality, suitably four, of spaced apart assembled sets of parts according to any of Claims 1 to 7. 15
11. A door according to Claim 10, the window light comprising a single or multi-pane window. 15
12. A door according to any of Claims 8 to 11, made of wood. 20
13. A door according to Claim 12, which is a fire door. 25
14. A set of parts, substantially as hereinbefore described with reference to the accompanying drawings. 25
15. A door, substantially as hereinbefore described with reference to the accompanying drawings. 25

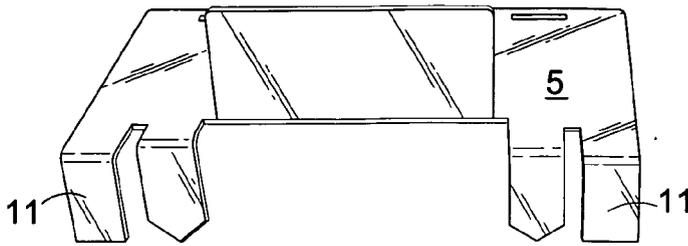


Fig. 1

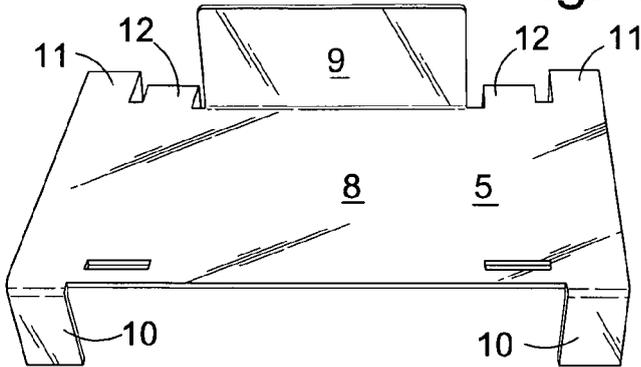
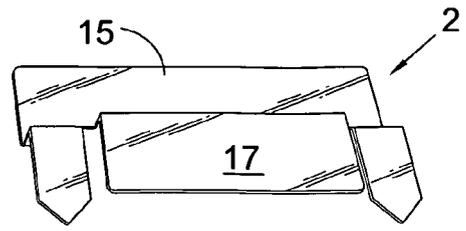


Fig. 2

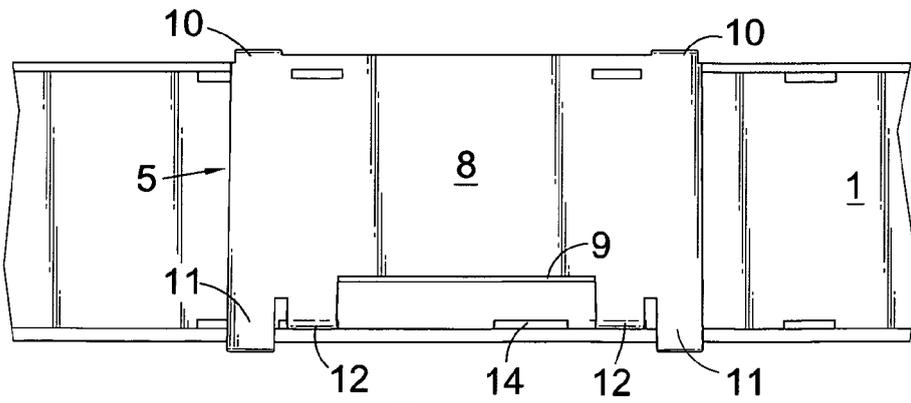
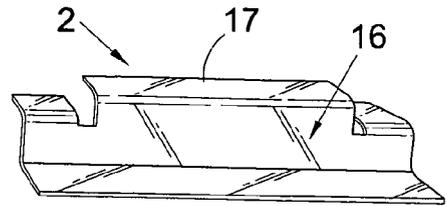


Fig. 3

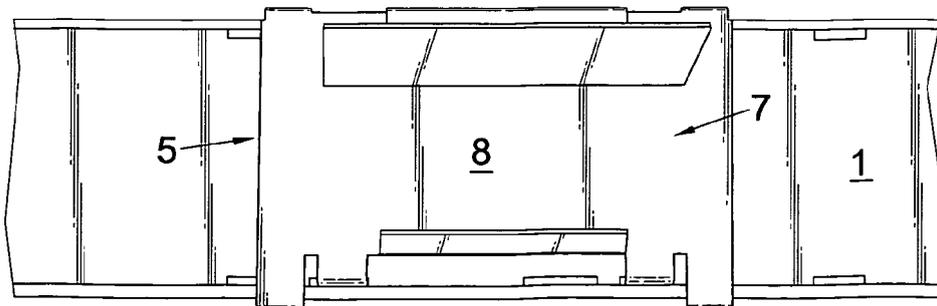


Fig. 4

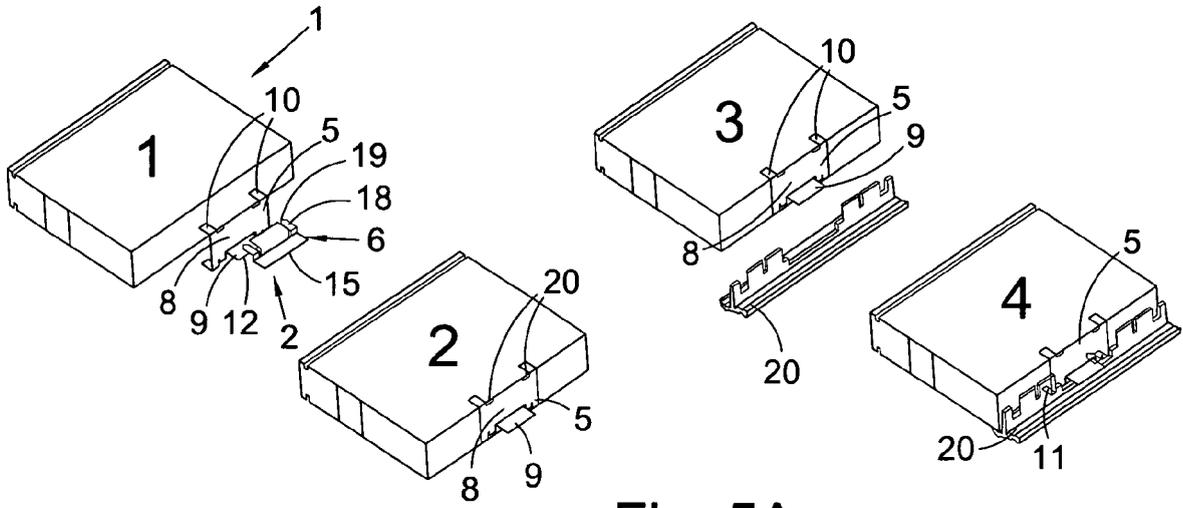


Fig. 5A

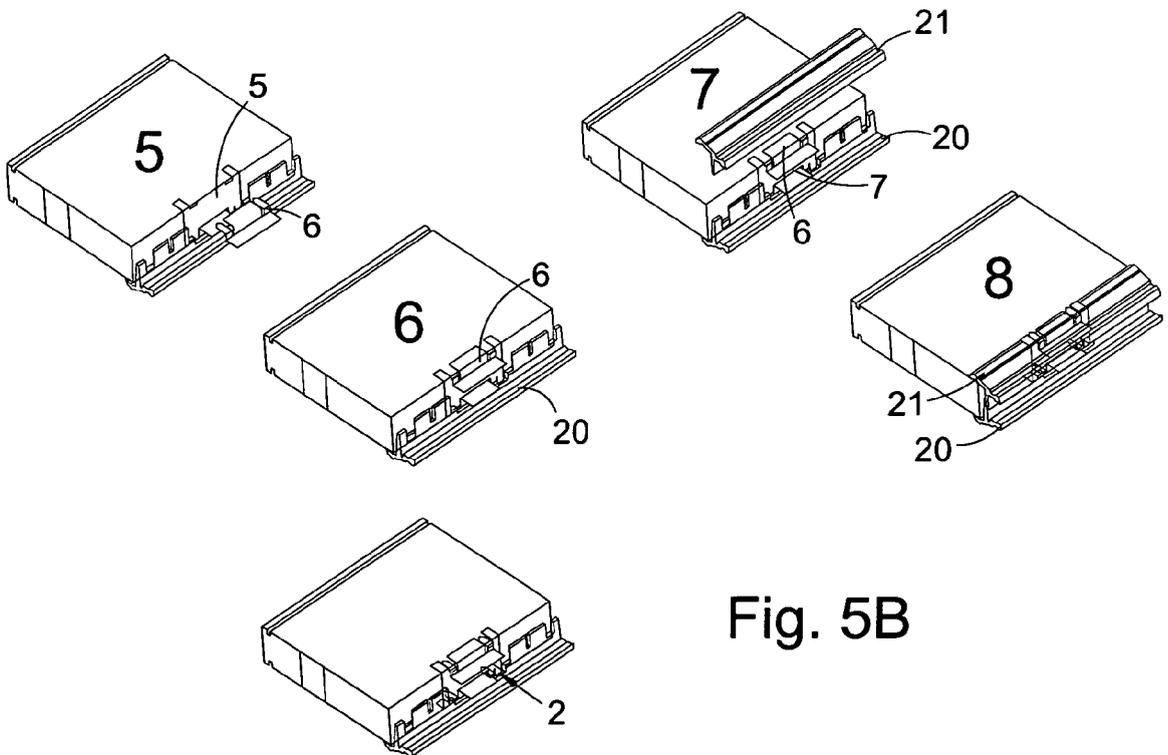


Fig. 5B

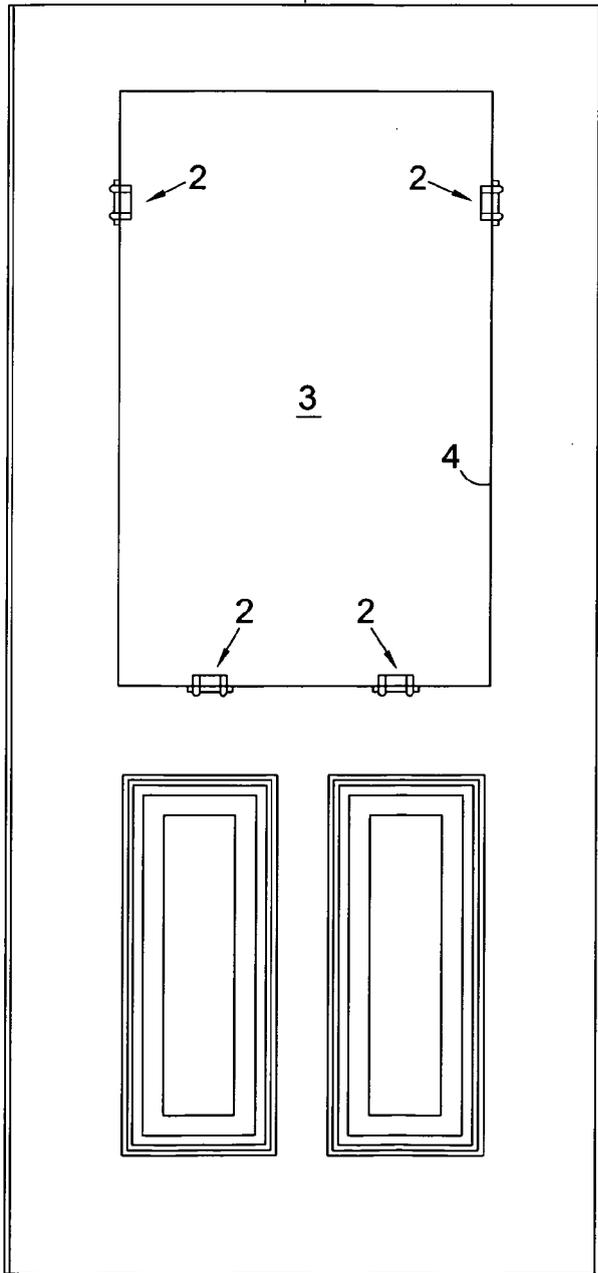
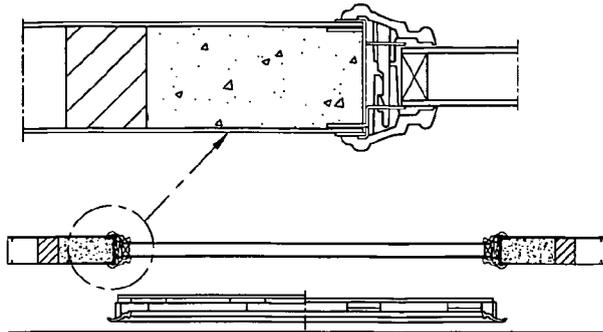


Fig. 6

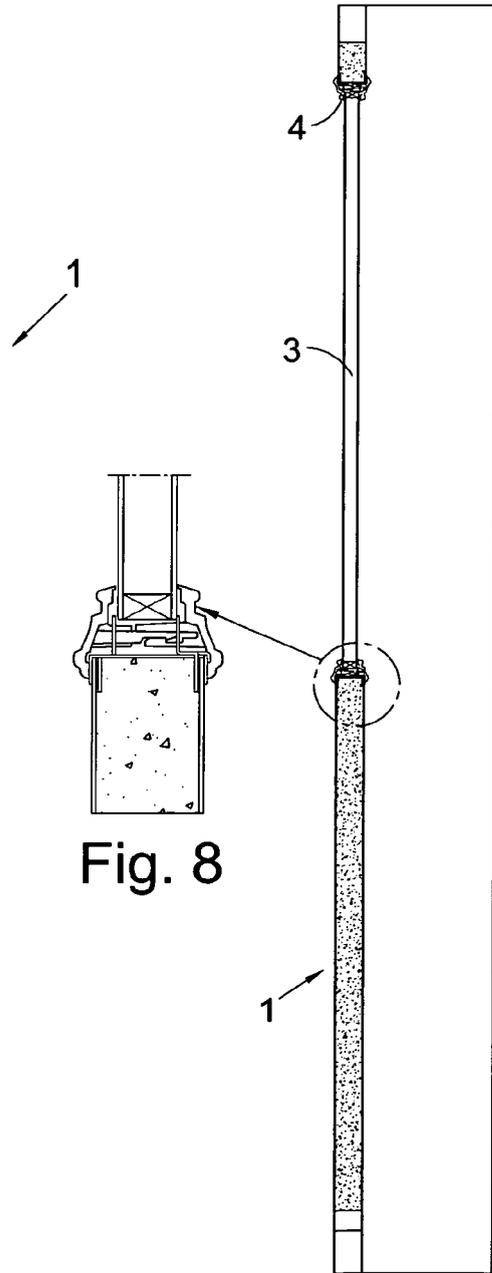


Fig. 8

Fig. 7

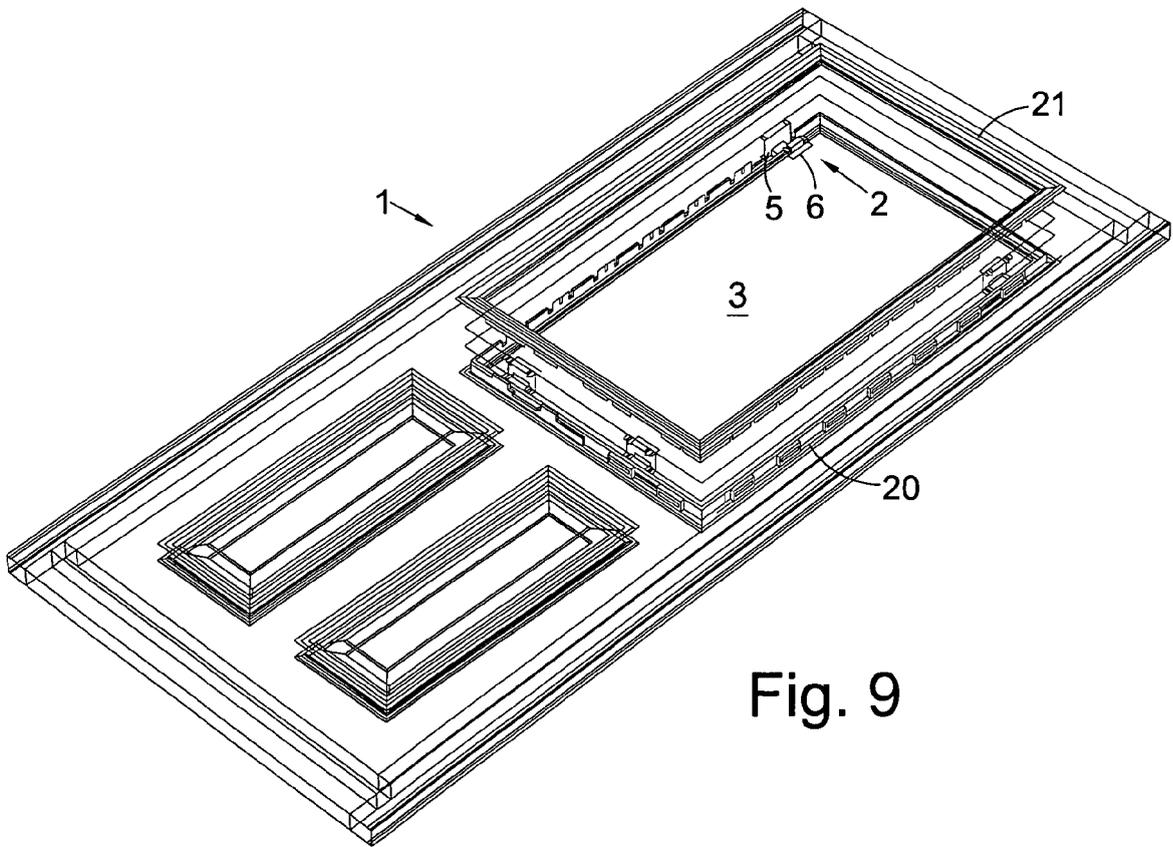


Fig. 9



EUROPEAN SEARCH REPORT

Application Number  
EP 09 25 2882

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 2 362 676 A (HARRISON KEITH ANTHONY [GB]) 28 November 2001 (2001-11-28) * page 2, line 7 - page 10, line 14; figures 1,3,4,5 *	1-15	INV. E06B3/54 E06B3/58
A	EP 1 959 085 A1 (NANYA PLASTICS CORP [TW]) 20 August 2008 (2008-08-20) * figures 1,2,5,6,7 *	1-15	
A	US 5 323 579 A (RUFF ROBERT O [US]) 28 June 1994 (1994-06-28) * the whole document *	1-15	
A	US 4 637 182 A (ELLSWORTH WENDELL E [US] ET AL) 20 January 1987 (1987-01-20) * the whole document *	1-15	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			E06B
Place of search		Date of completion of the search	Examiner
Munich		23 April 2010	Merz, Wolfgang
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X : particularly relevant if taken alone		T : theory or principle underlying the invention	
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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 25 2882

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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23-04-2010

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2362676	A	28-11-2001	NONE	
-----				
EP 1959085	A1	20-08-2008	EP 1959086 A2	20-08-2008
			GB 2446719 A	20-08-2008
-----				
US 5323579	A	28-06-1994	NONE	
-----				
US 4637182	A	20-01-1987	NONE	
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