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(54) Glazing system

(57) The invention relates to a glazing system comprising a plurality of glazing panels (10,11) made from a plastics material each panel having at least one edge region juxtaposed with the edge region of the other of said panels and wherein said juxtaposed edges are formed with or provided with an abutment (12,13) extending tranversely of the plane of each glazing panel, said glazing system further comprising a support structure (14) having a first part (15) which extends inwardly from the edge regions of the juxtaposed panels and along one side of the panels (10,11) and a second part (16) which extends inwardly from edge regions of said juxtaposed panels (10,11) and along the opposite sides of the panels from the first part (15) and wherein said second part (16) is of a formation whereby it at least partially encloses said abutments (12,13) to deter separation of said glazing panels from their support structure (14).

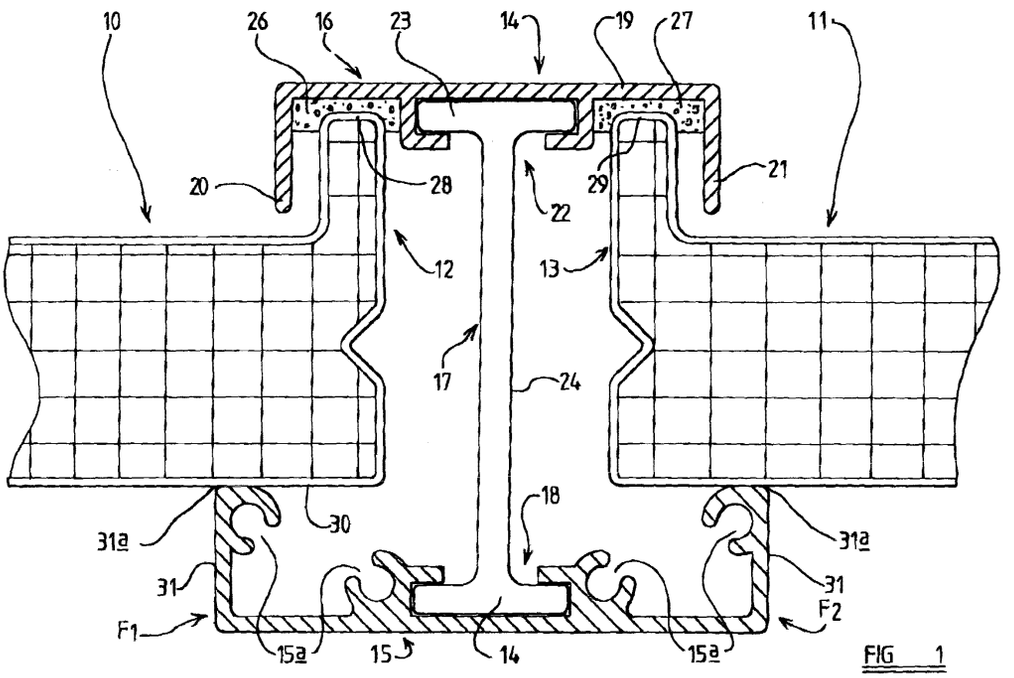

FIG 1

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Description

[0001] The present invention relates to a glazing system having glazing panels made of plastics material such as p.v.c. or polycarbonate materials and is primarily, but not exclusively, concerned with glazing systems having transparent or translucent panels

[0002] Plastics materials for glazing panels have become increasingly popular particularly since the introduction of multi-wall polycarbonate panelling since the latter are very strong and can be manufactured reasonably economically by an extrusion process. They are very light which is not only of benefit since the supporting structure does not have to bear a great weight but the light weight enables transport costs to be reduced and installation is more simple than glass panels which would be many times the weight for a comparable strength,

[0003] Because of the popularity of plastic glazing panels, such as those made of polycarbonate, they are increasingly used on buildings which leads to a problem because one of their primary uses is for roofing panels and in many cases it is not possible to provide sufficient security to prevent access to the roof, albeit precautions may be taken. It is necessary where access could be gained, irrespective of any deterrents, that the roof structure is sufficiently strong to eliminate or at least minimise the possibility of a person on the roof falling through the roofing panel.

[0004] Roofing panels made from plastics material and in particular multi-wall panels can be very strong particularly when trade from a material such as polycarbonate. There is however a problem in that compared with glass, for example, such roofing panels are relatively flexible. This gives them an advantage in their ability to absorb impact without breaking but has led to a considerable problem in that a severe impact can dislodge the panel from its supporting structure.

[0005] It will be appreciated that whereas the above mentioned panels have been described as roofing panels they, may also be used as walls or other parts of a structure, For the sake of convenience all such panels will hereinafter be referred to as glazing panels.

[0006] The invention is particularly concerned with a glazing system, hereinafter referred to as being of the kind specified, comprising a first and a second glazing panel, each made from a plastics material, one of said panels having at least one edge region adapted to be juxtaposed with the edge region of the oilier of said panels and wherein said juxtaposed edges are formed with or provided with an abutment extending transversely to the plane of each glazing panel, said glazing system further comprising a support structure having a first part adapted to extend inwardly from the edge regions of the juxtaposed panels and along one side of the panels and a second part adapted to extend inwardly from edge regions of said juxtaposed panels along the opposite sides of the panels of the first part to thereby define primary and secondary receiving portions for reception of the first and second respectively, and wherein said second part is of a formation enabling it at least partially to enclose said abutments to deter separation of said glazing panel from its support structure.

[0007] It is an object of the present invention to provide a glazing system that overcomes and minimises the problem mentioned above.

[0008] According to one aspect of the invention we provide a sub-assembly for use in a glazing system of the kind specified wherein the sub-assembly comprises a first. glazing panel, having an abutment element transverse to the glazing panel, mounted within a primary receiving portion of a support structure, said primary receiving portion being formed to deter separation of the panel from the support structure.

[0009] Said first glazing panel may be made from polycarbonate materials.

[0010] The primary receiving portion may have a first part which supports the first glazing panel from below.

[0011] The primary receiving portion may have a second part which overlies the first glazing panel and has upper flange parts that extend transversely to the plane of the first glazing panel which together with the first part provide a formation at least partially to enclose said abutments.

[0012] The support structure may comprise a first part, a second part and an inter-connecting part adapted to be secured with or located with said first and second part.

[0013] A_1 least the second part and the intermediate connecting part may be capable of being mutually secured or located only by virtue of mutual relative longitudinal sliding movement.

[0014] Said inter-connecting part may be of substantial strength to impart rigidity to the glazing system.

[0015] Each glazing part may be substantially planar.

[0016] The intermediate part may be a pultrusion.

[0017] The abutment may be provided integrally with said first panel during manufacture of the panel.

[0018] Alternatively the abutment may be made separately from the first panel and mounted thereon.

[0019] According to another aspect of the invention we provide a glazing system of the kind specified incorporating at least one sub-assembly according to any one of the preceding statements of invention.

[0020] It has been found that a structure as described above in addition to providing a very strong structure, also providing a weatherproof seal around juxtaposed edges of the panel.

[0021] Whereas the glazing panels have been described as being substantially planar this is intended to indicate that the thickness of the glazing panel, which may be of any desired thickness and may have a plurality of spaced wall sections, is small compared with the overall area covered by the glazing panel. Furthermore the or both sides of the glazing panel may not necessarily be flat but may be corrugated or have some oth-

er formation as desired.

[0022] It will further be appreciated that whereas the panels have been described hereinafter as roofing panels, and it is primarily in such a position where the strength of the structure is required, glazing systems subject to this invention is equally applicable to pitched roofs, flat roofs or indeed panels used in the vertical wall of building or walls that are inclined to the vertical.

[0023] Conveniently the intermediate part may be an extrusion from metal or a rolled section and in some instances the intermediate part may comprise a pultrusion.

[0024] When the intermediate pan is formed as a pultrusion this enhances the glazing structure in that (lot only can a piilii.usioii be made from very light but very strong material but furthermore it may be made from a material having good thermal insulation thereby obviating the need for a thermal break material which may adversely affect the strength of the structure as a whole.

[0025] Preferably the first and second part of the support structure may be made from an extruded material such as aluminium and may be formed with sections adapted to receive an intermediate part as described above and also may be provided with other formations adapted to receive other fixing elements and/or sealing elements.

[0026] Said abutments may be provided on said glazing panels during the manufacture thereof.

[0027] Alternatively said abutments may be made separately from the glazing panels and mounted thereon.

[0028] According to a further aspect of the present invention we provide a glazing system comprising a plurality of glazing panels made from a plastics material each panel having at least one edge region adapted to be juxtaposed with the edge region of another glazing panel and wherein said juxtaposed edges are formed with or provided with an abutment extending transversely to the plane of each glazing panel, said glazing system further comprising a support structure having a first part adapted to extend inwardly from the edge regions of the juxtaposed panels and along one side of the panels and a second part adapted to extend inwardly from edge regions of said juxtaposed panels and along the opposite sides of the panels from the first part and wherein said second part is of a formation enabling it at least partially to enclose said abutments to deter separation of said roofing panels from its support structure.

[0029] It is a second object of the invention to provide a support structure enabling a pair of roofing panels to be simply secured thereto

[0030] According to a further aspect of the present invention we provide a support structure adapted to support edge regions of juxtaposed glazing panels, said support structure comprising a first part adapted to lie along one side of the juxtaposed edge regions of said glazing panels, a second part adapted to lie over the opposite side of juxtaposed glazing panels in the region of said edge region and an intermediate part adapted to be connected to or located with said first and second parts.

[0031] At least the second part and the intermediate connecting part may be capable of being mutually secured or located only by virtue of mutual relative longitudinal sliding movement therebetween.

[0032] Preferably said intermediate part is of form and made from a material to add considerable strength to the structure as a whole.

[0033] Whereas it has been proposed that the abutments formed on the roofing panel may be formed during the manufacture the panel, it is also envisaged that the abutment may be subsequently secured to the panels by any suitable means and said abutments may for example comprise first and second opposed members defining a slot adapted to receive the roofing panel, at least one of said opposed members providing said abutment.

[0034] Preferably said opposed members are connected to each other in a manner to provide said abutment.

[0035] Said abutment may be provided on the side of the panel or if wished an abutment may be provided on both sides of the panel albeit the distance the abutment extends from the plane of the panel on either side may differ.

[0036] Said abutment member when secured to the panel may be secured by any suitable means such as adhesive and may be made from a similar material from which the panel is made for example polycarbonate, but in order to provide sufficient strength may be of a thickness greater than any individual wall thickness of the panel to which it is secured.

[0037] It is a further object of the present invention to provide a new or improve method of assembling roof structures.

[0038] According to a further aspect of the present invention we provide a method of assembling a glazing system or the kind specified comprising the steps of:

1. taking a first glazing panel made from a plastics material and having a first supporting structure mounted thereon;
2. securing the first support structure to a support member;
3. inserting an abutment provided along the edge of a second glazing panel an entry region provided in the support structure;
4. moving the second glazing panel along an angular path to a position, (for example, in which ii is substantially co-planar with the first glazing panel) so that the second glazing panel has its abutment captively retained by said support structure.

[0039] A second support structure may be secured along one edge of the second glazing panel.

[0040] The first glazing panel and the first support

structure may comprise a sub-assembly according to any one the preceding statements of invention.

[0041] The invention will now be described by way of example with reference to the accompanying drawings wherein:

Figure 1 is sectional view through a pair of juxtaposed roofing panels located in a support structure,
Figure 2 is a perspective view of the support structure shown in Figure 1,
Figure 3 is a perspective view of one of the composite roofing panels and support structure shown in Figure 1.
Figure 4 is a sectional view which illustrates a method of assembly of the roof system when each panel is provided with a support structure,
Figure 5 is a fragmentary sectional view of a completed roof system,
Figure 6 is a diagrammatic side view illustrating how the support structures may be secured to rafters or purlins,
Figure 7 is a diagrammatic cross-sectional view of an alternative roofing panel to rhat of Figures 1 to 6 which illustrates an alternative form of abutment on the roofing panel,
Figure 8 is a view similar to that of Figure 7 which illustrates a still further alternative form of abutment on the roofing panel, and
Figure 9 is a sectional view of an end closure member for the glazing system of Figure 1.

[0042] Referring first to Figure 1, a cross section through a support member and two roofing panels is shown. A first panel generally indicated at 10 comprises a four wall polycarbonate sheet of honeycomb-like structure which provides a very strong but light. structure. The total thickness of the sheet may be about 20mm, the width may be any desired dimension for example between ½ metre and 1 metre and the length of the panel may be whatever is required since the panel is made by an extrusion process.

[0043] A panel 11 is also shown, the panel 11 being the same as the panel 10 albeit the width and length may be different if required. It will be appreciated that the panels 10 and 11 do not have to be identical for example one may be translucent or opaque while the other is substantially transparent. Alternatively one may be of a different colour from the other.

[0044] The panels 10 and 11 are each formed with a transverse abutment 12 and 13 respectively, the abutment being formed during the extrusion process.

[0045] A support structure is shown at 14 and comprises a first part 15, a second part 16 and an I-shaped intermediate part 17. In the present example the first and second parts are made by extrusion of a suitable aluminium alloy and the first part 15 is provided with formations 15a to receive self-tapping screws to secure end members to the first part. The first part 15 has edge flanges 21a having inwardly directed lips 31a to support the roofing panels 10 and 1 I as hereinafter to be described and may be provided with seals to provide a weatherproof seal between the roofing panels 10 and 11 and the first part 15. The first part 15 is provided with an T-shaped slot 18 in which is engaged a lower limb of the intermediate part 17.

[0046] The second part 16 of the support structure 14 comprises an elongate part 19 and downwardly depending transverse flanges 20 and 21, the second part 16 being formed with a T-shaped slot 22 in which is located an upper limb 23 of the intermediate part.

[0047] The first and second parts 15. 16 can be connected to the intermediate part only by mutual longitudinal relative sliding engagement of the limbs of the I-shaped part 17 in the larger width part of the T-shaped slots 18 and 22 with the web of the I-shaped part 17 extending through the narrower width mouth part of the T-shaped slots.

[0048] The intermediate part 17 has a central part 24 interconnecting the lower part 19 and the upper part 23. The intermediate part 17 is designed to provide the strength in the support structure 14 and is preferably made from a strong material. It is envisaged that in some instances it may be formed from an aluminium extrusion or a rolled steel section. However it has been found that if formed as a pultrusion incorporating high strength but light reinforcing material such carbon fibre, kevlar etc. a light but very strong section may be formed. Such a pultrusion has additional benefits in that the materials from which they are formed are good thermally insulating materials and hence this obviates the need for a thermal break which may adversely affect the structure as a whole,

[0049] The second part 16 may be provided with sealing material such as that shown at 26 and 27 to provide a weatherproof seal between the second part 16 and the upper edge region 28 and 29 of the abutments 12 and 13.

[0050] The provision of the abutments 12 and 13 on the roofing panels 10 and 11 in combination with the strength provided by intermediate part 17 and the downwardly depending flanges 20 and 21 on the second part 16 ensures that if the panel 10, for example, is subjected to a substantial downward force, such as may be applied by an impact, some flexing of the panel will take place. The abutment 12 will be pulled into contact with the downwardly depending flange 20 of the second part 16 and may be distorted, to a certain extent, depending on the downwards force. The honeycomb structure of the panel 10 will to a certain extent. be deformed thereby absorbing the impact but at the same time, because of the presence of the abutment 12 and the downwardly depending flange 20, the edge of tile panel 10 cannot escape from the support structure 14. Thus the flexibility of the roofing panel 10 coupled with the rigidity and strength of the support structure will enable the roofing assembly as a whole to withstand any substantial down-

ward force and remain intact. This not only provides a degree of safety to any person falling on the roof or climbing on the roof but also protects anyone in the enclosure covered by the roof.

[0051] Whereas the components 10 and 11 have been shown as a polycarbonate multi-wall structure, it may be of any suitable material. It may for example comprise a solid polycarbonate sheet Many different variations of multi-wall polycarbonate is available and it may twin-walled, triple-walled, quadruple-walled and quintuple-walled, the thicknesses of such sheets typically varying between 10mm and 25mm.

[0052] It will be seen that the first part 15 has a substantial width and is wider than the second part 16 to ensure that even when the roofing panel 10 or 11 is distorted and the abutment, for example the abutment 12, is in contact with the downwardly depending element 20 the lower edge of region 30 of the roofing panel 10 is still supported by the upper surface of the lip 31a of the first part 15 thus maintaining the integrity of the structure.

[0053] Referring now in addition to Figure 2. which shows a diagrammatic perspective view of the support structure of Figure I but with the screw receiving formation 15a omitted for clarity. It can be seen from the illustration in Figure 2 that the first part 15, the intermediate part 17 and the second part 16 are longitudinally slidable relative to each other which assists assembly and indeed by allowing relative sliding movement between the elements, securement of the first part 15, for example, to rafters, purlins or the like is permitted. Furthermore if after a period of time it is necessary to replace weatherproof seal or indeed if it is ever necessary to replace any of the roofing panels, separation of the parts of the support structure can be carried out without difficulty to allow for simple replacement of a roofing panel. Although the intermediate part 17 is shown as I-shaped and the slots 18 and 22 are of T-shape, if desired any other longitudinally interengageable formation may be provided on the parts 17 and 18/22.

[0054] Referring now to Figure 3, a combination of a roofing panel 10 and a support structure 14, both as described hereinbefore, to provide a unit is shown and it is envisaged that a roofing panel 10 and a support structure 14 unit may be pre-assembled off site. The advantage of pre-assembling ensures that the correct parts are available together so that a roof may be assembled on site in a manner as shown in Figure 4. As can be seen in Figure 3 the first and second parts 15, 16 provide primary and secondary receiving formations F_1, F_2, the primary formation F_1 being occupied by the panel 10 shown in Figure 4 and the secondary formation being available to receive a second part. The roofing panel 10 may be pre-assembled or fastened to the support structure 14 by virtue of being mechanically clamped and/or adhesively secured in position between the first 15 and second 16 parts of the primary receiving formation F_1.

[0055] Referring to Figure 4, the construction of the roof may be seen, the roof being constructed from units, or sub-assemblies of first roofing panel 10 and support structure 14 as shown in Figure 3. A first panel/support structure element 40 unit is secured in position on a support member comprising, in this example, a plurality of spaced paralled supporting rafters one of which is shown at 41. A second roofing panel/supporting structure unit 42 is then placed in position by inserting the abutment 43 thereof into the space 44 of the receiving formation F_2, (as illustrated in respect of the third panel/support structure 45), and subsequently, securing the support structure of the second element 42 in position on the support member 41. The manner of inserting each roofing panel/support structure unit is shown in connection with the third panel/support structure combination 45 and it can be seen there is a first position indicated at 46 in which the abutment 47 is inserted into the gap 48 and then a clockwise rotation of the panels support structure 45 enables it to take up a position in which the support structure is supported on the rafters. Each subsequent panel support structure unit is connected in similar fashion, thus the provision of roofing panel/support structure unit enables a rapid assembly of the roof structure.

[0056] Figure 5 illustrates a roof assembly, which is shown being constructed in Figure 4, in an assembled condition.

[0057] Referring now to Figures 6a-c, different views of the support structure are shown with emphasis to the relative sliding movements between first part 15, second part 16 and intermediate part 17 are shown. In particular, the ability of the three parts of the support structure to be moved relative to each other.

[0058] Referring to Figure 6a, relative longitudinal sliding movement of the parts 15, 16, 17 to the position shown in Figure 6a enables a fastener such as that shown at 50 to pass through apertures provided in first part 15 to secure the first part 15 to a rafter as shown at 51. Once the fastener 50 is in position the second part 16 and intermediate part 17 may then be moved to the position shown in Figure 6b to permit of insertion of a further fastener 53 to secure the first part 15 to the rafter 54. The parts 15-17 are then moved to the position shown in Figure 6c whereby roofing panel/support structure unit may be engaged therewith as described with reference to Figure 4.

[0059] It is also envisaged that the intermediate part 17 may not necessarily be continuous throughout the length of the roofing panels being secured and where the rafters 51 and 54 are of a spacing that allows sufficient overlap between end parts of the intermediate part 17, small gaps may be present between juxtaposed ends of the intermediate part 17 to facilitate the securing of the power part 15 to rafters such as those shown in 51 and 54.

[0060] An alternative glazing panel will now be described referring to Figure 7a. In this embodiment, a twin-wall polycarbonate sheet is shown at 70. The poly-

carbonate sheet 70 is not formed during manufacture with an abutment. However in order to provide the sheet with an abutment to prevent it being dislodged from structural support member as a result of impact or other means, an abutment member 71 is provided which is secured to the roofing panel 70 by means of adhesive 72. In addition to or as an alternative to adhesive the abutment 71 may be welded, or mechanically secured or otherwise secured to the panel 70. In the embodiment shown in Figure 7a it will noted that the abutment 71 has not only an upwardly extending part 73 but also has a smaller downwardly depending part 74 and it is envisaged that the abutment 73 will contact the downwardly depending part on the second part of the support structure and the abutment member 74 will contact an upwardly extending part of the first part 15 of the support structure in the event of impact on the roof panel so as to spread the load between different parts of the roof panel and so the abutment 71 further enhances the security and strength of the structure.

[0061] In Figure 7b a triple-wall polycarbonate panel is shown at 75 having an abutment member 76 similar to that as hereinbefore described with reference to Figure 7a.

[0062] In Figure 7c a solid polycarbonate panel is shown at 77, it too being provided with an abutment 78 similar to that shown at 71 and 76. The manner in which the abutment members 76, 78 are secured to their respective panel 75, 77 is as described in connection with Figure 7a.

[0063] Referring now to Figure 8 there is shown a still further and preferred glazing panel comprising a twin-wall polycarbonate sheet shown at 80. The polycarbonate sheet 80 is not formal during manufacture with an abutment. However, in order to provide the sheet with an abutment to prevent it being dislodged from a structural support member as the result of an impact, or other means, an abutment member 81 is provided which is secured to the roofing panel 80 by means of an adhesive 82 disposed in chamber C.

[0064] As an alternative to adhesive the abutment 81 may be welded or mechanically secured or otherwise secured to the panel 80. The abutment member 81 is made of extruded rigid U.P.V.C. but may be made of any other suitable material such as polycarbonate as an extrusion and so is of constant dimension throughout its length and is cut to length as desired to fit the roofing panel concerned. The abutment member 81 has a vertical limb 83 which terminates, at its lower end in a flange 84 having an upturned part 85. Between the upturned part 85 and the vertical limb 83, the upwardly facing surface of the flange 84 is separated from the under-surface of the panel 80 by a small gap 86.

[0065] At its upper end the abutment 83 has an upper flange 87 and a downwardly extending limb 88 parallel to the part 83. The downwardly extending limb 88 has an inwardly extending flange 89 provided with two downwardly extending parts 90a. 90b at its inner and outer ends. Between the parts 90a, 90b the downwardly facing surface of the limb 89 is spaced from the upwardly facing surface of the panel 80 by a small gap 91 in which a suitable adhesive is disposed to secure the component to the panel.

[0066] The upper surface of the flange 87 is provided with flexible rib 92 for sealing engagement with the under-surface of the elongate part 19 of the support structure 14. This is in replacement of the sealing material such as that shown at 26 and 27 in Figure 1. Engagement of the flange 87 with the under surface of the panel 19 and engagement of the under surface of the part 84 with the limb 31a provides mechanical retention the panel in the receiving formation F_1 to provide a sub-assembly as described hereinbefore.

[0067] Referring now to Figure 9 there is illustrated an end closure member 100 for fitment to the edges of the two opposite end roof panels which are not engaged with a support structure 4. As can be seen, the closure member 100 has a vertical limb 101 from which an upper flange 102 projects to overlie the upper surface of the panel and which is provided with a arcuate part 103 for resilient gripping engagement with the panel. This member is also provided with a stepped lower flange 104 to provide a moisture trap an upper part 105 of which has an upper surface 106 for engagement with the under-surface of the panel. The limb 101 projects downwardly as shown at 107 beyond the flange 104 to provide a drip detail.

[0068] The ribs R provide a spacer to space the main part of the end closure member 100 away from the panel to which it is fitted.

[0069] Although the examples described and illustrated hereinbefore are all roofing panels if desired the invention may be applied to other glazing panels such as are used on walls or other parts of a structure

[0070] In the present specification "comprise" means "includes or consists of" and "comprising" means "including or consisting of".

[0071] The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately, or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

Claims

1. A sub-assembly for use in a glazing system of the kind specified wherein the sub-assembly comprises a first glazing panel, having an abutment element transverse to the glazing panel, mounted within a primary receiving portion of a support structure, said receiving portion being formed to deter separation of the panel from the support structure.

2. A sub-assembly as claimed in Claim 1 wherein said first glazing panel is made from polycarbonate materials.

3. A sub-assembly as claimed in Claim 1 or Claim 2 wherein the primary receiving portion has a first part which supports the first glazing panel from below.

4. A sub-assembly as claimed in Claim 3 wherein the primary receiving portion has a second part which overlies the first glazing panel and has upper flange parts that extend transversely to the plane of the first glazing panel which together with the first part provide a formation at least partially to enclose said abutments.

5. A sub-assembly as claimed in Claim 4 wherein the support structure comprises a first part, a second part and an inter-connecting part adapted to be secured with or located with said first and second part.

6. A sub-assembly according to Claim 5 wherein at least the second part and the intermediate connecting part are capable of being mutually secured or located only by virtue of mutual relative longitudinal sliding movement.

7. A sub-assembly as claimed in Claim 5 or Claim 6 wherein said interconnecting part is of a strength to impart rigidity to the glazing system.

8. A sub-assembly as claimed in any one of Claims 5 to 7 wherein said intermediate part is a pultrusion.

9. A sub-assembly as claimed in any one of the preceding claims wherein the abutment is provided integrally with said first glazing panel during manufacture of the panel.

10. A sub-assembly as claimed in any one of Claims 1 to 8 wherein said abutment is made separately from the first glazing panel and mounted thereon.

11. A sub-assembly according to any one of the preceding claims wherein each glazing part is substantially planar.

12. A glazing system of the kind specified incorporating at least one sub-assembly according to any one of Claims 1 to 12.

13. A glazing system comprising a plurality of glazing panels made from a plastics material each panel having at least one edge region juxtaposed with the edge region of the other of said panels and wherein said juxtaposed edges are formed with or provided with an abutment extending tranversely of the plane of each glazing panel, said glaring system further comprising a support structure having a first part which extends inwardly from the edge regions of the juxtaposed panels and along one side of the panels and a second part which extends inwardly from edge regions of said juxtaposed panels and along the opposite sides of the panels from the first part and wherein said second part is of a formation whereby it at least partially encloses said abutments to deter separation of said glazing panels from their support structure,

14. A glazing system comprising a support structure adapted to support edge regions of juxtaposed glazing panels, said support structure comprising a first part adapted to lie along one side of the juxtaposed edge regions of said glazing panels, a second part adapted to lie over the opposite side of juxtaposed glazing panels in the region of said edge region and an intermediate part adapted to be connected to or located with said first and second parts.

15. A glazing system according to Claim 14 wherein at least the second part and the intermediate connecting part are capable of being mutually secured or located only, by virtue of mutual relative longitudinal sliding movement therebetween.

16. A method of assembling a glazing system which may be of the kind specified comprising securing an abutment member to a glazing panel which is formed separately from the abutment member.

17. A method according to Claim 16 wherein the abutment member is made from a similar material to that from which the panel is made, for example, polycarbonate, but of a thickness greater than any individual wall thick thickness or the panel to which it is secured.

18. A method of assembling a glazing system of the kind specified comprising the steps of :

1. taking a first glazing panel made from a plastics material and having a first supporting structure mounted thereon;
2. securing the first support structure to a support member;
3. inserting an abutment provided along the edge of a second glazing panel in an entry region provided in the support structure;
4. moving the second glazing panel along an angular path to a position, (for example, in which it is substantially co-planar with the first glazing panel) so that the second glazing panel has its abutment captively retained by said support structure,

19. A method according to Claim 18 wherein a second

support structure is secured along one edge of the second glazing panel.

20. A method according to Claim 19 wherein the first glazing panel and the first support structure comprise a sub-assembly according to any one of Claims 1 to 12.

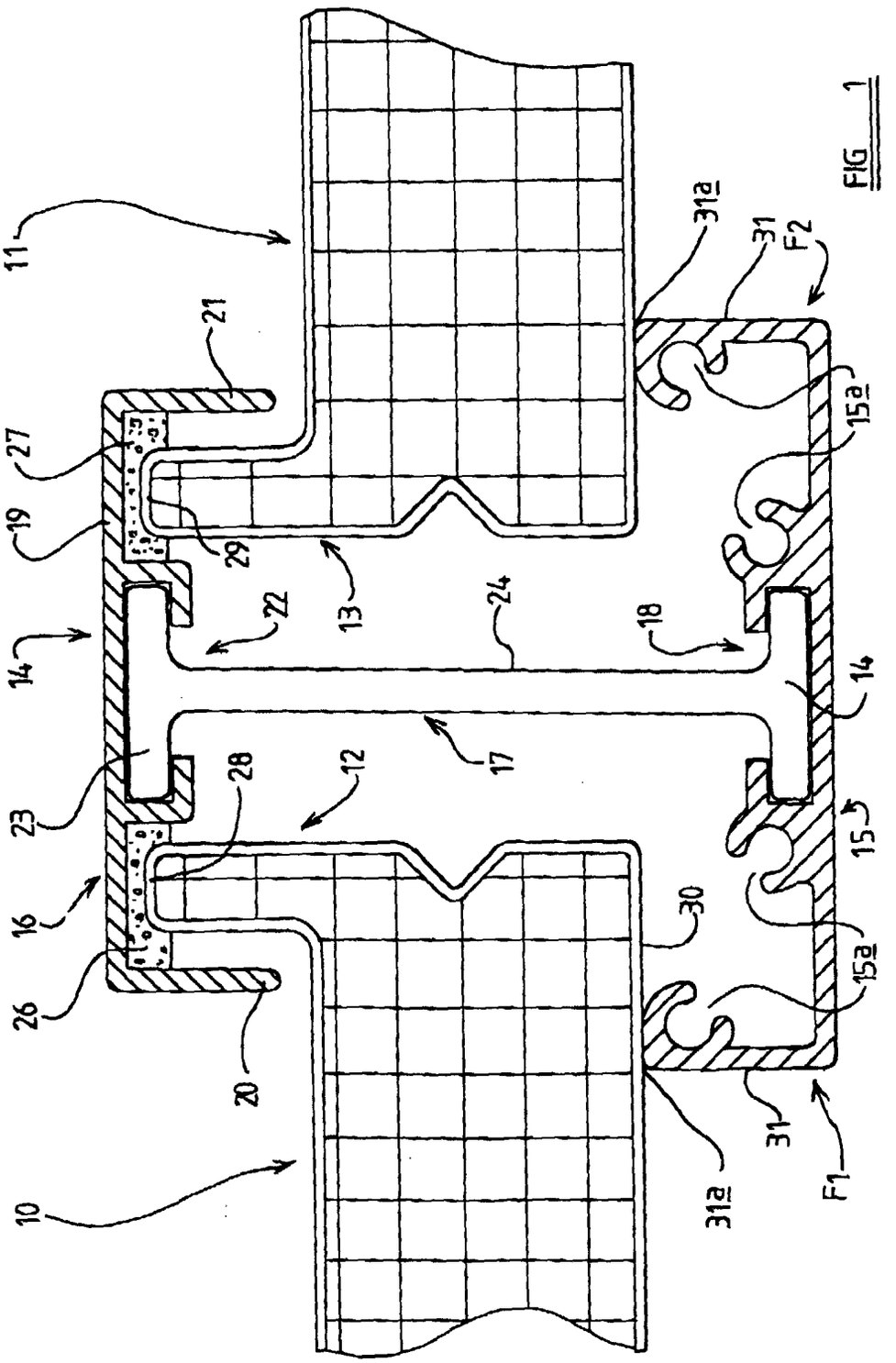
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FIG 1

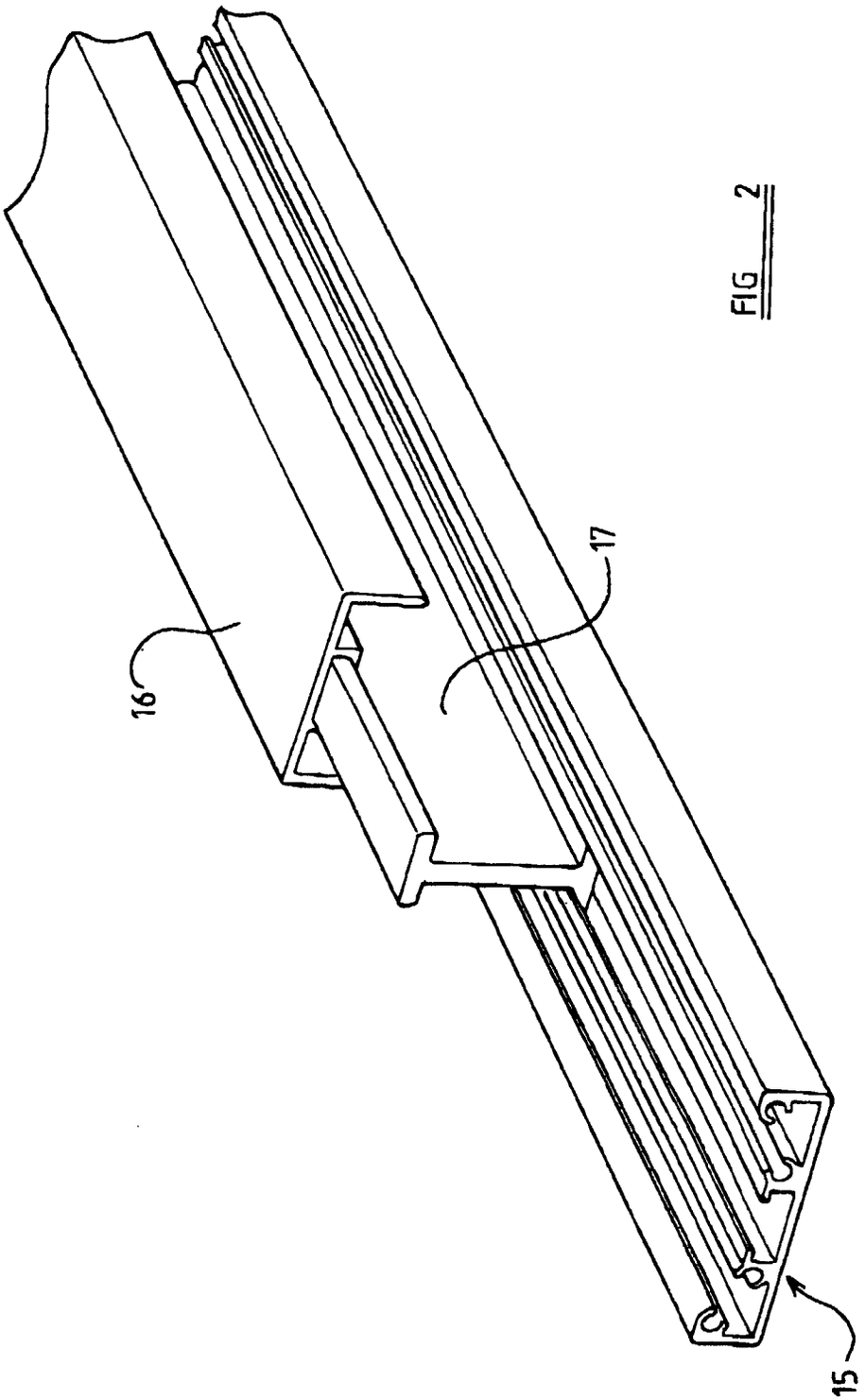
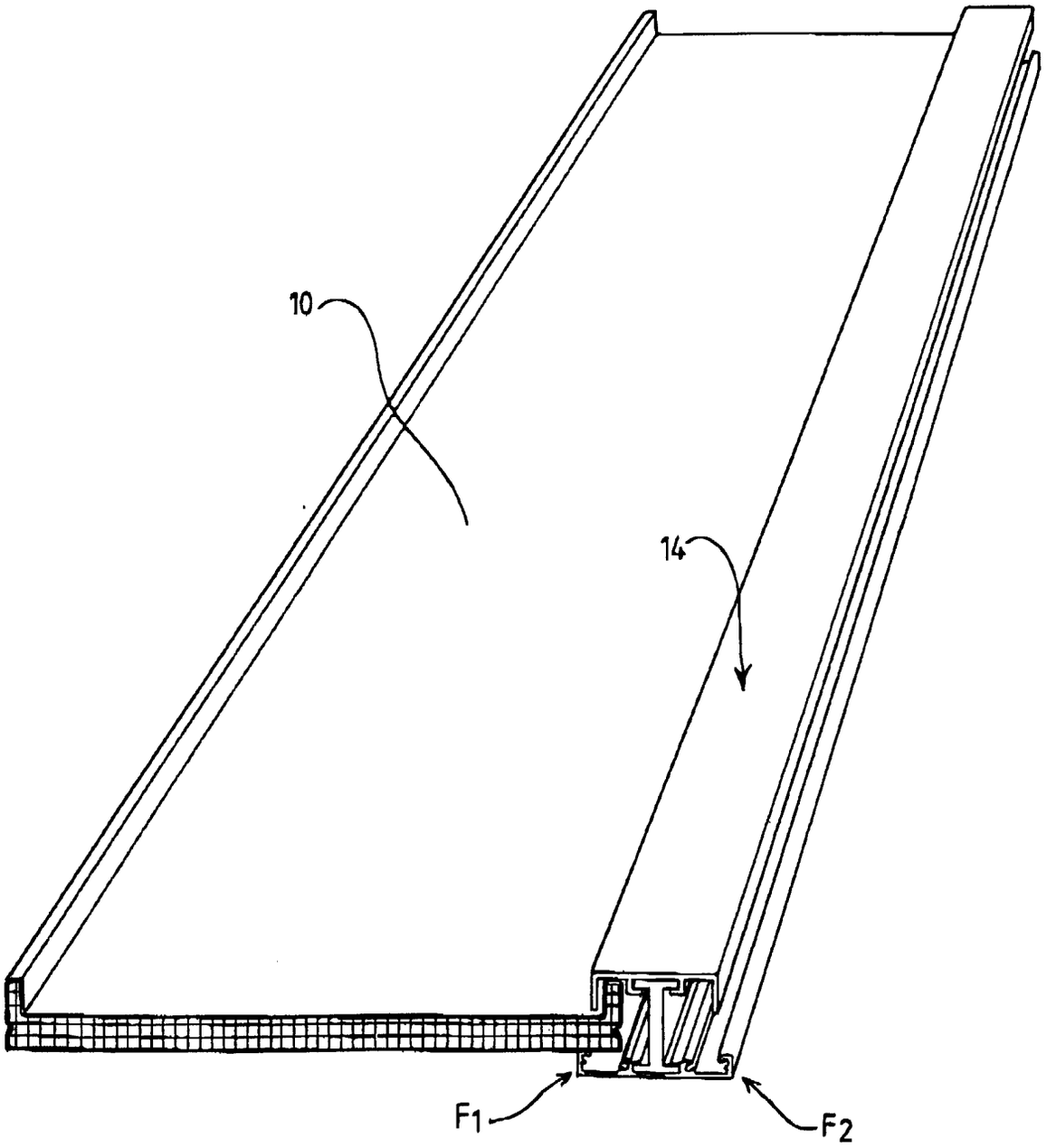


FIG 2

FIG 3



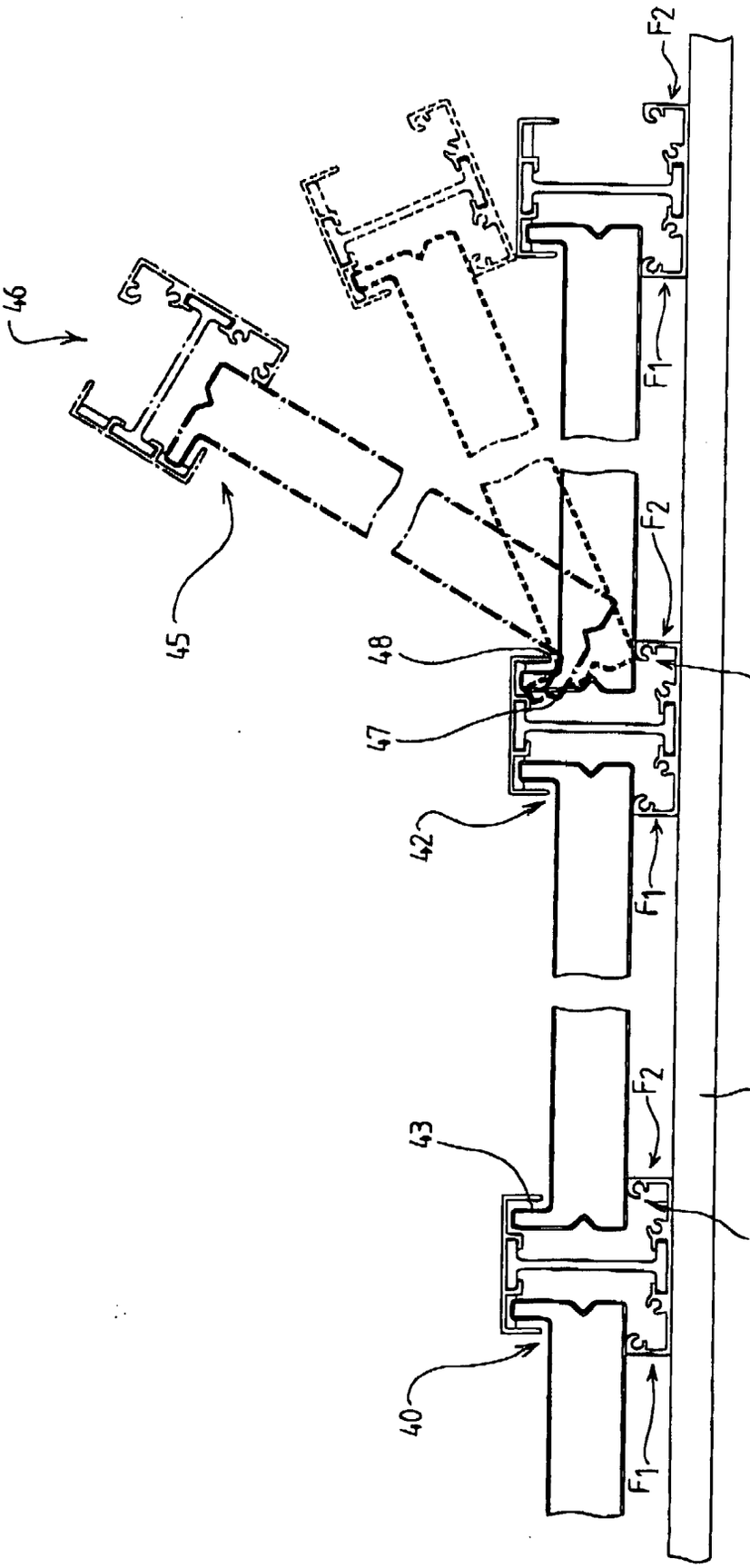


FIG 4

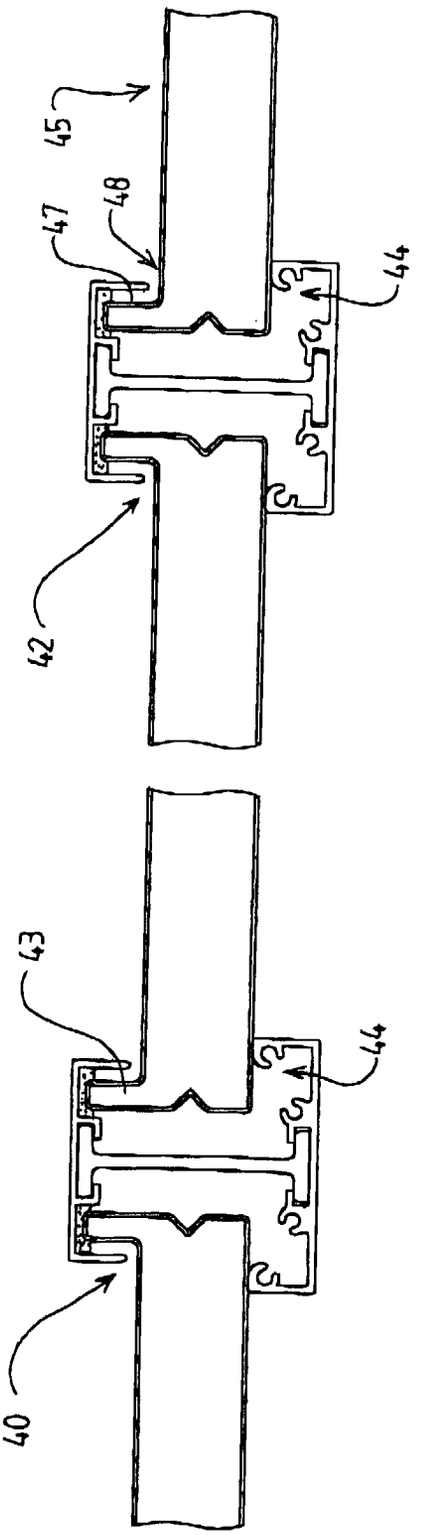


FIG 5

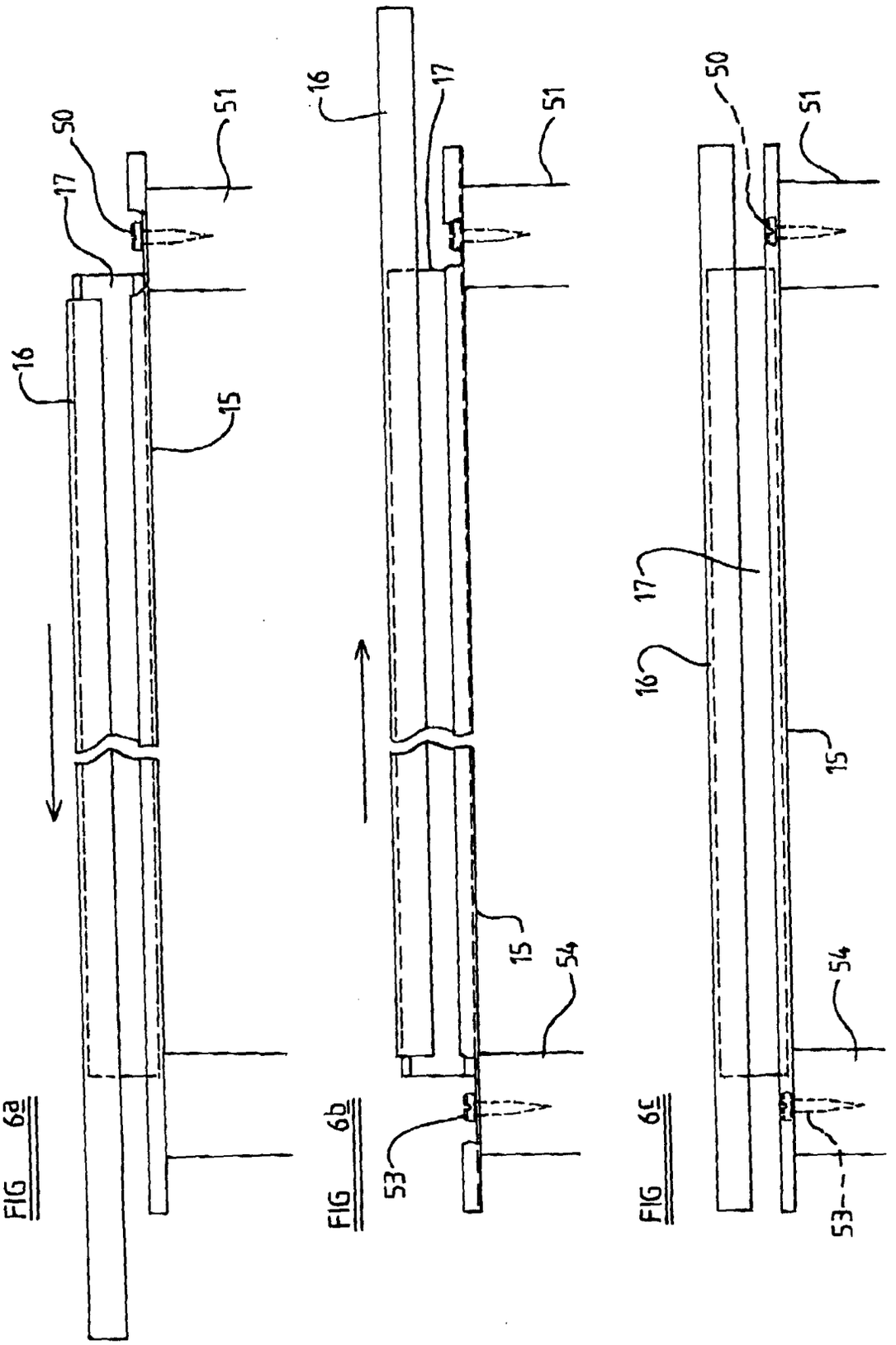

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FIG 6a
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FIG 6b
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FIG 6c

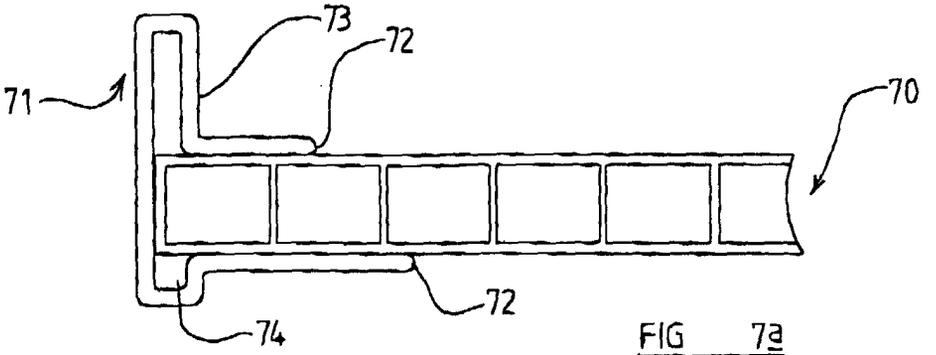

FIG 7a

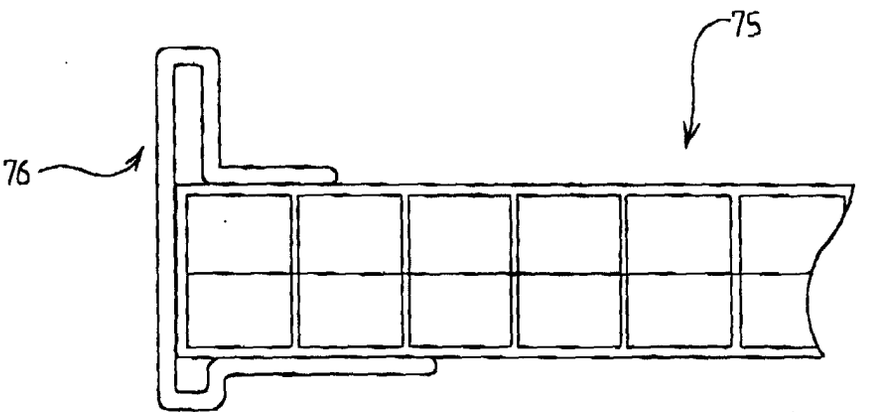

FIG 7b

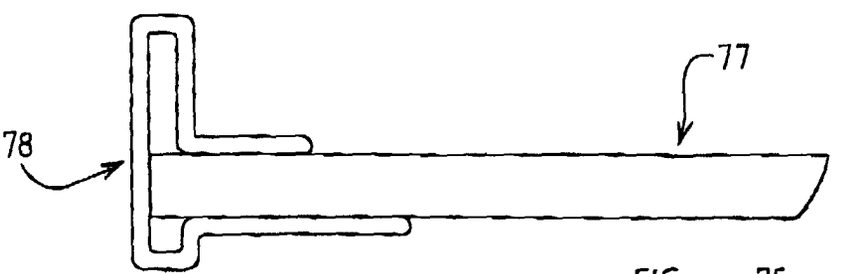

FIG 7c

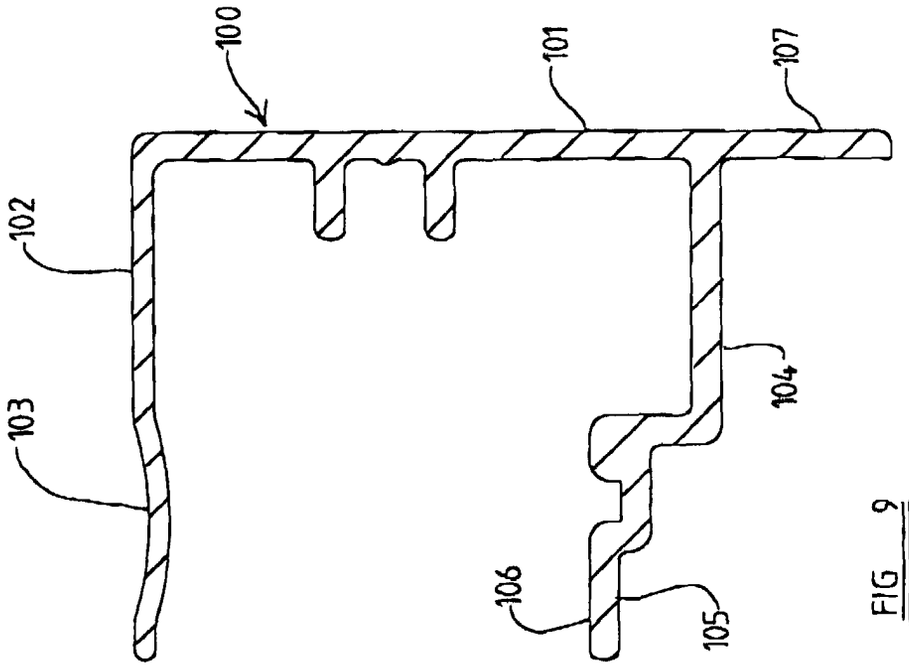
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FIG 9

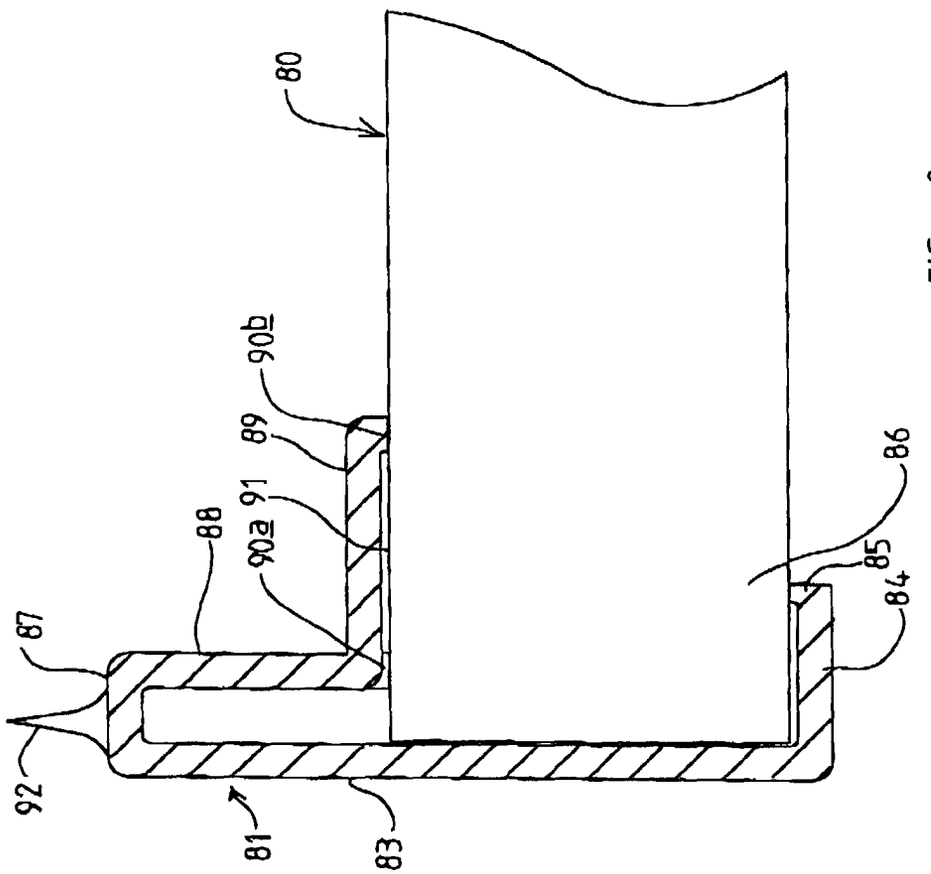
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FIG 8