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## Description

### BACKGROUND OF THE INVENTION

The present invention relates to a continuous front for buildings and the like, made of aluminium section members.

As is known, a main problem in making building continuous fronts is that of properly coupling plate-like elements which are inserted into the grid defined by the aluminium section member vertical and horizontal frames.

In fact, this plate-like elements, usually comprising glass panes or finishing panels, must be engaged with the structural elements of the fronts so as to provide a firm continuous assembly.

Such a continuous front for buildings according to the preamble of claim 1, is known from US-A-4 809 475.

Known methods for coupling the mentioned plate-like elements, however, are affected by some drawbacks which are related both to the assembling operations, which are very complex and require a very long time, and to the tightness and stability of the performed couplings.

### SUMMARY OF THE INVENTION

Accordingly, the aim of the present invention is to overcome the above mentioned drawbacks, by providing a continuous front for buildings and the like, which is made starting from aluminium section members and in which it is possible to structurally connect plate-like elements in a very quick and simple way, so as to provide a firm and stable assembly.

Within the scope of the above mentioned aim, a main object of the present invention is to provide such a continuous front in which the plate-like elements can be coupled in an effectively tight way.

Another object of the present invention is to provide such a building front which is very reliable and safe in operation and which, moreover, can be easily made starting from easily available elements and materials and which, moreover, is very advantageous from a mere economic standpoint.

According to the present invention, the above aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a continuous front for buildings and the like, made of aluminium section members according to the characterizing portion of claim 1.

### BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the invention will become more apparent from the fol-

lowing detailed description of a preferred embodiment thereof which is illustrated, by way of an indicative but not limitative example in the accompanying drawing where:

Figure 1 is a horizontal cross-sectional view showing a continuous front according to the invention and, more specifically, in the left half of the drawing there being illustrated a first embodiment of the invention, while in the right half thereof there is shown a second embodiment.

### DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the figure of the accompanying drawing, the continuous front for buildings and the like, made of aluminium section members, according to the invention, comprises a main framework which is conventionally made starting from uprights and cross-members consisting of aluminium section members, overall indicated at the reference number 1.

These section members 1 are provided with a quadrangular shape central body 2, from a side of which there extend a lug 3 which is provided, on a side thereof, with recesses 4 for engaging with fixing means, as it will be disclosed in a more detailed way hereinafter and being provided, at the front thereof, with a recess 5 adapted to receive a tightness gasket 6 for providing tightness on the frames, indicated overall at the reference number 10, which can be either of a fixed or of an openable type.

More specifically, these frames are also made of aluminium section members adapted to hold a plate-like element which can comprise either a glass pane or a finishing panel.

With reference to the first embodiment shown in the left portion of the drawing, it should be apparent that the frame comprises section members 20, with a central body 21 including a recess 22 for receiving fittings 23 adapted to lock the frame to a fixed structure or, if desired, means adapted to provide set movements thereof.

The section member 20 is moreover provided with an outer leg 25 therefrom a right-angle leg 26 extends which ends with a further outer leg 27.

The main feature of the present invention is that the outer leg 25 is provided with a recess or seat 30 therein a section member 31 can be engaged, having a trapezoidal cross-section, to which there is coupled structural silicone 32 which can be associated with the glass pane or plate-like element, generically indicated at 35 so as to provide a firm tight coupling.

Moreover, between the glass pane 35 and leg 25 there is provided a polyethylene bottom joint 36 adapted to operate as a holding element, as well as

an outer bottom joint 37 operating on the outer face.

The assembly further comprises a silicone gasket 39 coupling the outer sheet of the glass pane with the leg 27, a gasket 40 arranged between the central portion 21 and the inner face of the glass pane, and a sealing gasket 42 arranged between the section member 20 and the bearing section member 1.

In the embodiment shown in the right half of the drawing, there is provided a section member, overall indicated at the reference number 50, which is conceptually analogous to the above disclosed section member, with the main difference that the outer leg, indicated at 51, does not comprise any recess and is coupled to a front leg 52 therefrom a pin length 53 extends which can be arranged between the inner sheet 54a and outer sheet 54b of a glass pane 54, which is designed so as to hold a structural silicone material 55 adapted to connect the inner sheet to the outer sheet of the glass pane.

Thus, there is obtained a monolithic glass pane which can be coupled to the frame owing to the provision of the pin 53 to be arranged between the two glass sheets; advantageously, on the pin there is provided a coupling gasket, indicated at 60 and made of a silicone rubber material.

A polyethylene joint 61 is moreover provided which is arranged between the front leg 52 and the outer glass sheet, as well as a silicone gasket 62 adapted to operate as an outer finishing element.

From the above disclosure it should be apparent that the invention affords the possibility of making continuous building fronts in which the plate-like element is structurally firmly coupled to the coupling frame so as to provide a monolithic assembly which is particularly stable.

The invention, as disclosed, is susceptible to several modifications and variations all of which will come within the scope thereof.

While the invention has been disclosed and illustrated with reference to some preferred embodiment thereof, it should be apparent that the disclosed embodiments are susceptible to several modifications and variations all of which will come within scope of the appended Claims.

## Claims

1. A continuous front for buildings and the like, made of aluminium section members, said front including a main framework (1), comprising uprights and cross-members cooperating for providing a grid structure in which there are engaged either fixed or openable elements, comprising a section member frame the section members of which are provided with

- means for coupling to said section members at least a plate-like element (35), characterized in that said coupling means comprise a trapezoidal cross-section member (31) to which there being coupled structural silicone (32) for coupling said plate-like element (35), and said trapezoidal cross-section member (31) is engaged in a mating recess (30) formed on a front portion of a frame section member, the front portion of a frame section further comprises an inner bottom joint (36) made of a polyethylene like material, arranged between a front leg (25) of said frame section member and an inner sheet of said plate-like element (35).
2. A building continuous front according to one or more of the preceding claims, characterized in that said front further comprises an outer bottom joint (37), also made of a polyethylene material, arranged between an outer leg and the outer sheet of said plate-like element (35).
  3. A continuous building front according to one or more of the preceding claims, characterized in that said outer sheet and said inner sheet of said plate-like member are respectively an outer and inner glass sheet and in that said front further comprises tightness silicone material (32) arranged in an adjoining relationship with said outer bottom joint (37) and interposed between said inner glass sheet and said outer glass sheet of said plate-like element (35).
  4. A continuous building front according to one or more of the preceding claims, characterized in that said outer sheet and inner sheet of said plate-like element (35) are coupled to one another by a structural silicone layer (25), having a groove at the periphery of said plate-like element (35).
  5. A continuous building front according to claim 1, characterized in that said coupling means comprises a coupling pin (53) projecting from a front leg (52) of said frame section member and which can be engaged between said inner and outer sheets (54a, 54b) of said plate-like element (54).
  6. A continuous building front according to claim 5, characterized in that said front further comprises a coupling gasket (60) associated with said pin (53) and adapted to be arranged between said inner and outer sheets (54a, 54b).
  7. A continuous building front according to claim 5, characterized in that said front further com-

prises a polyethylene joint (61) arranged between said outer sheet (54b) and pin (53), there being moreover provided a further silicone gasket (62) arranged between one end of said front leg (52) and said outer sheet (54b).

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Ansprüche, dadurch gekennzeichnet, daß diese äußere Platte und diese innere Platte dieses plattenähnlichen Teils (35) durch eine Schicht Bausilicon (25) miteinander verbunden sind, eine Rille an der Peripherie dieses plattenähnlichen Teils (35) besitzend.

### Patentansprüche

1. Eine kontinuierliche Fassade für Gebäude und dergleichen, hergestellt aus Aluminiumprofilteilen, diese Fassade einschließend ein Rahmentragwerk (1), umfassend Pfosten und Querträger, zusammenarbeitend, um eine Gitterstruktur bereitzustellen, mit der entweder unbewegliche oder bewegliche Teile verbunden sind, umfassend einen Profilteilrahmen, dessen Profilteile mit einer Vorrichtung zum Verbinden dieser Profilteile mit mindestens einem plattenähnlichen Teil (35) bereitgestellt sind, dadurch gekennzeichnet, daß diese Verbindungsvorrichtung ein Teil mit trapezförmigem Querschnitt (31) umfaßt, mit dem Bausilicon (32) zum Verbinden dieses plattenähnlichen Teils (35) verbunden ist, und dieses Teil (31) mit trapezförmigem Querschnitt in eine Gegenaussparung (30) verbunden ist, gebildet auf einem Vorderteil eines Rahmenprofilteils, das Vorderteil eines Rahmenprofilteils weiterhin eine innere Bodenverbindung (36) umfaßt, hergestellt aus einem polyethylenähnlichen Material, angeordnet zwischen einem vorderen Fuß (25) dieses Rahmenprofilteils und einer inneren Platte dieses plattenähnlichen Teils (35).
2. Eine kontinuierliche Fassade für Gebäude gemäß einem oder mehreren der vorstehenden Ansprüche, dadurch gekennzeichnet, daß diese Fassade weiterhin eine äußere Bodenverbindung (37) umfaßt, ebenfalls hergestellt aus Polyethylenmaterial, angebracht zwischen einem äußeren Fuß und der äußeren Platte dieses plattenähnlichen Teils (35).
3. Eine kontinuierliche Fassade für Gebäude gemäß einem oder mehreren der vorstehenden Ansprüche, dadurch gekennzeichnet, daß diese äußere Platte und diese innere Platte dieses plattenähnlichen Teils jeweils eine äußere und eine innere Glasplatte sind und dadurch, daß diese Fassade weiterhin Abdichtsilicon (32) umfaßt, angebracht in einer benachbarten Beziehung zu dieser äußeren Bodenverbindung (37) und zwischen diese innere Glasplatte und diese äußere Glasplatte dieses plattenähnlichen Teils (35) eingeschoben.
4. Eine kontinuierliche Fassade für Gebäude gemäß einem oder mehreren der vorstehenden

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5. Eine kontinuierliche Fassade für Gebäude gemäß Anspruch 1, dadurch gekennzeichnet, daß diese Verbindungsvorrichtung einen Verbindungsstift (53) umfaßt, sich von einem vorderen Fuß (52) dieses Rahmenprofilteils erstreckend und der zwischen diesen inneren und äußeren Platten (54a, 54b) dieses plattenähnlichen Teils (34) verbunden werden kann.

6. Eine kontinuierliche Fassade für Gebäude gemäß Anspruch 5, dadurch gekennzeichnet, daß diese Fassade weiterhin eine Verbindungsleitung (60) umfaßt, verbunden mit diesem Stift (53) und angepaßt, zwischen den inneren und äußeren Platten (54a, 54b) angebracht zu werden.

7. Eine kontinuierliche Fassade für Gebäude gemäß Anspruch 5, dadurch gekennzeichnet, daß diese Fassade weiterhin eine Polyethylenverbindung (61) umfaßt, angebracht zwischen dieser äußeren Platte (54b) und dem Stift (53), dort außerdem eine weitere Silicondichtung (62) bereitgestellt, angebracht zwischen einem Ende dieses vorderen Fußes (52) und dieser äußeren Platte (54b).

### Revendications

1. Une façade continue pour bâtiments et similaires, faite avec des éléments profilés d'aluminium, ladite façade incluant une charpente principale (1), comprenant des poinçons et des traverses coopérant pour donner une structure à grille où des éléments ou bien fixes ou bien ouvrables sont encastrés, comprenant une ossature d'éléments profilés les éléments profilés de laquelle sont pourvues d'un dispositif pour accoupler auxdits éléments profilés au moins un élément en forme de plaque (35), caractérisée en ce que ledit dispositif d'accouplement comprend un élément profilé à coupe trapézoïdale (31), auquel y est accouplée de la silicone pour la construction (32) pour accoupler ledit élément en forme de plaque (35), et ledit élément profilé à coupe trapézoïdale (31) est encastré dans un siège de raccordement (30) formé sur une partie frontale d'un élément profilé de l'ossature, la partie frontale d'un profilé de l'ossature comprend en plus un joint intérieur de fond (36) fait en matériau comme

- le polyéthylène, arrangé entre un pied frontal (25) dudit élément profilé de l'ossature et une plaque intérieure dudit élément en forme de plaque (35).
2. Une façade continue pour bâtiments selon l'une ou plusieurs des revendications précédentes, caractérisée en ce que ladite façade en plus comprend un joint de fond extérieur (37), fait lui aussi en matériau polyéthylène, arrangé au milieu d'un pied extérieur et de la plaque extérieure dudit élément en forme de plaque (35).
3. Une façade continue pour bâtiments selon l'une ou plusieurs des revendications précédentes, caractérisée en ce que ladite plaque extérieure et ladite plaque intérieure dudit élément en forme de plaque sont respectivement une plaque de verre extérieure et intérieure, et en ce que ladite façade en plus comprend du matériau d'étanchéité en silicone (32)安排 en une rélation avoisinante par rapport audit joint de fond extérieur (37) et intercalé au milieu de ladite plaque de verre intérieure et de ladite plaque de verre extérieure dudit élément en forme de plaque (35).
4. Une façade continue pour bâtiments selon l'une ou plusieurs des revendications précédentes, caractérisée en ce que ladite plaque extérieure et ladite plaque intérieure dudit élément en forme de plaque (35) sont accouplées entre elles au moyen d'une couche (25) en silicone pour la construction, ayant une rainure à la périphérie dudit élément en forme de plaque (35).
5. Une façade continue pour bâtiments selon la revendication 1, caractérisée en ce que ledit dispositif d'accouplement comprend une cheville d'accouplement (53) se projetant d'un pied frontal (52) dudit élément profilé de l'ossature et qui peut être encastrée au milieu desdites plaques intérieure et extérieure (54a, 54b) dudit élément en forme de plaque (54).
6. Une façade continue pour bâtiments selon la revendication 5, caractérisée en ce que ladite façade en plus comprend un joint d'accouplement (60) associé à ladite cheville (53) et adapté à être rangé au milieu desdites plaques intérieure et extérieure (54a, 54b).
7. Une façade continue pour bâtiments selon la revendication 5, caractérisée en ce que ladite façade en plus comprend un joint (61) en polyéthylène rangé au milieu de ladite plaque extérieure (54b) et de ladite cheville (53), y étant en plus prévu un ultérieur joint en silicone (62) rangé entre l'une des extrémités dudit pied frontal (52) et ladite plaque extérieure (54b).

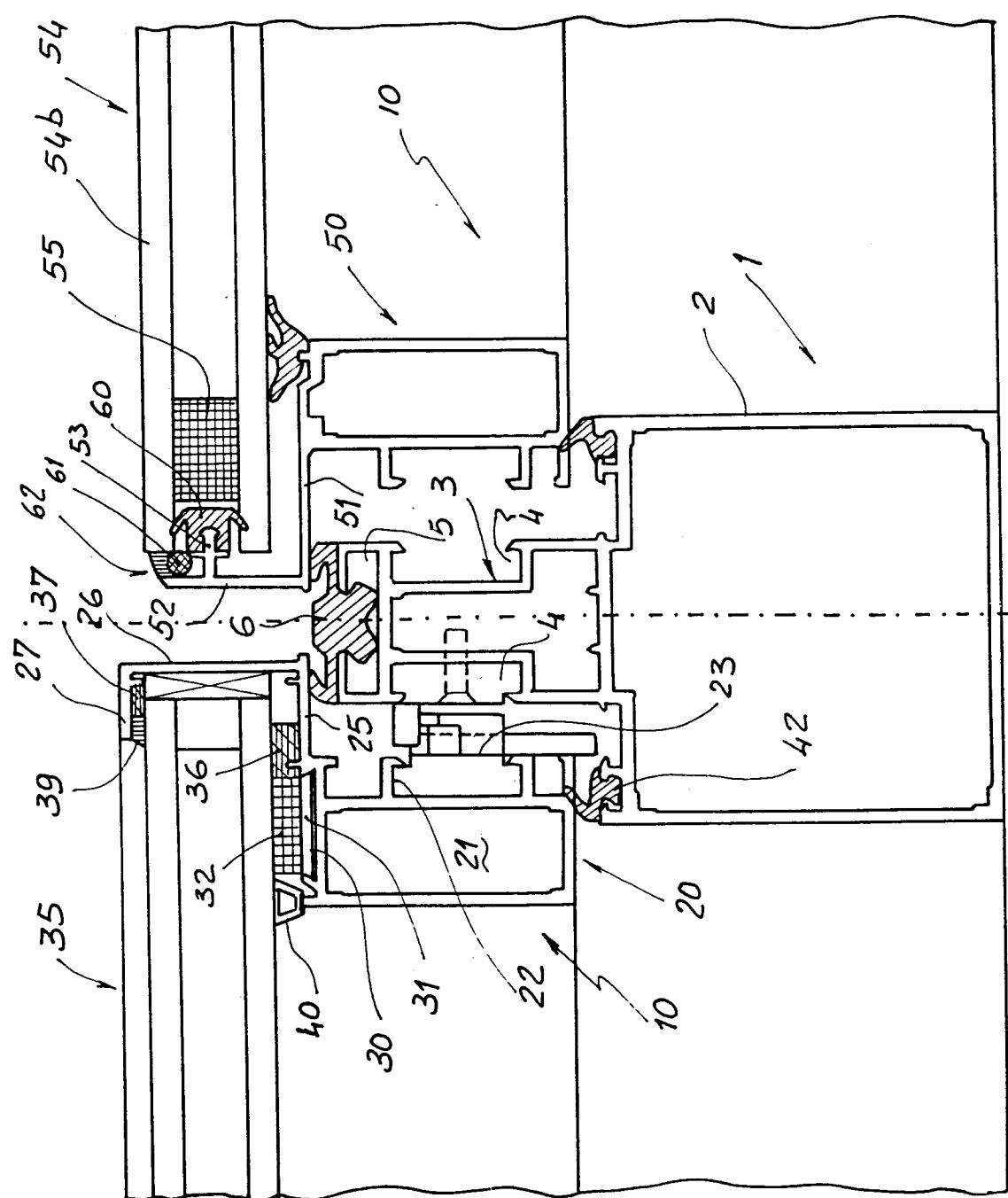


Fig. 1