



(12)

EUROPEAN PATENT APPLICATION

(21) Application number : **94202651.9**

(51) Int. Cl.⁶ : **E04B 2/96**, E06B 3/263,
E06B 3/54

(22) Date of filing : **16.09.94**

(30) Priority : **20.09.93 NL 9301624**

(43) Date of publication of application :
03.05.95 Bulletin 95/18

(84) Designated Contracting States :
BE DE FR GB IT NL

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(54) **Quick-fit structural glazing.**

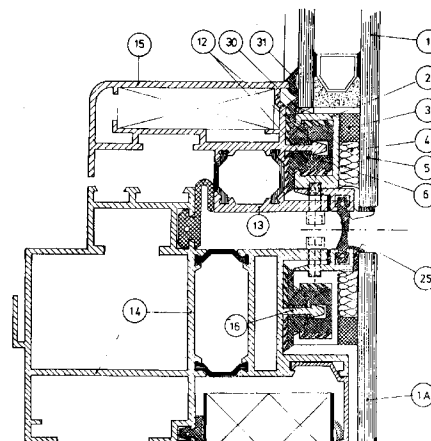
(57) Method and means for putting a panel 1 on a wall-construction, in which a C-shaped profile 2, comprising an elastic element 6 provided with lips 7 snapping on the ends 8 of the legs 9, is fixed to the panel 1.

The element 6 is provided with a groove 10, having an enlarged part 11 at its end.

The wall-construction comprises a tongue-profile 16, having an outer enlarged part to which the groove of the elastic element 6 is pressed during the assembly of the panel 1.

The wall-construction comprise screws 18 of which the central axes are parallel to the plane of the panel 1 and which fit in a groove 29 into a leg 9 of the C-shaped profile 2 and which serve to adjust and secure the panel 1 with respect to the wall-construction.

Fig. 1



The invention refers in the first place to a method for putting a structural glazing on a wall-construction. In this method, panels made of glass or another material are put on a wall-construction.

It is known for this purpose to make use of bolts or screws. This had the disadvantage that these are visible or difficult to handle in particular when the panel has to be exchanged.

Also it is known to connect a panel to the wall-construction by applying mastic. This requires great care when fitting the panels. The panels must be correctly positioned with respect to each other in order not to upset the appearance of the wall. Furthermore the exchange of a panel is more troublesome since the old mastic layer has to be carefully removed from the wall-construction.

The invention now intends to overcome these disadvantages and foresees the fitting of a mainly C-shaped profile on that side of the panel which, in fixed position, is adjacent to the wall-construction, optionally by glueing.

In this C-shaped profile is fitted an elastic element, the form of which principally corresponds the inner form of the C-shaped profile provide with cams, which grip to the inwardly pointing ends of the legs of the profile to form a seal element which on the one hand lies against the outer surface of the ends of the cams of the profile and which on the other hand will be adjacent to the wall-construction after fitting. The said elastic element is provided with a groove which lies in the perpendicular bisecting plane of the element and which is provided, near to the inner end, with an enlarged part.

The fixing of the panel on the wall-construction is done by pressing the panel together with the C-shaped profile, onto a tongue-shaped profile, which is extending from the wall-construction and which slots into the groove in the elastic element.

The tongue-shaped profile is provided with an enlarged part at the end that enters in the enlarged part of the groove. The panel, by the use of screws of which the central axes are parallel to the plane of the panel and which are fixed into parts of the wall-construction, can be adjusted in its plane and simultaneously can be secured with respect to the wall-construction by turning the screws in a groove fitted in that outwardly-facing, with respect to the panel, side-wall of the leg of the C-shaped profile.

The panel can be provided with the C-shaped profile in the workshop. The connection can be made in particular by the use of mastic. After that, the elastic element can be installed and the whole construction can be transported to the assembly site. Mastic does not have to be used at the construction site. The fixing of the panel on the wall-construction can easily be realised by clicking the groove of the elastic element over the tongue-shaped profile connected to the wall-construction.

Doing this a firm connection between the panel and the wall-construction can be obtained. After this the screws are tightened and enter the groove in the side wall of the C-shaped profile, by which said profile is secured with respect to the wall-construction. The position of the panel can be adjusted by tightening or loosening the screws.

It is clear that great care has to be taken to avoid too large a displacement of the panel with respect to the wall-construction in order to prevent failure of the elastic element present in the C-shaped profile.

It will be evident, that the edges of the panels of the wall-construction must be spaced a certain small distance one from another in order to permit tightening of the screws.

It is especially envisaged that the space between the panels is sealed by means of fitting to the side-wall of the C-shaped profile, outside the region where the screws are located, a sealing profile perpendicular to the side-wall such, that two adjacent sealing profiles form a resilient connection.

During assembly or disassembly the screws can easily be reached by pushing away the elastic sealing profiles.

In order to connect the sealing profile to the C-shaped profile, it is envisaged that, after glueing the C-shaped profiles to the panel, a pick-up element will be connected to the outwardly-facing side-wall of leg of the C-shaped profile.

This said pick-up element consists of a C-shaped part to which a part of the sealing profile is fixed and which part comprises an outwardly extended lip. The C-shaped pick-up element is provided with a leg which extends along the side wall of the leg of the C-shaped profile and by which it is connected to it.

The C-shaped pick-up element can thus extend beyond the C-shaped profile and be adjacent to the joint which is present, so protecting this joint. Optionally, another lip can be connected to the outwardly extending lip of the sealing profile. This second lip extends forwardly to the panel and is resiliently connected to it.

The invention is also related to means for applying the above described method, which means consists of a C-shaped profile, of which the side face of at least one of the legs is provided with a groove, of an elastic part of which the form corresponds mainly with the inner form of the C-shaped profile and which elastic parts comprises clips able to clip on to the inwardly extended ends of the legs.

The elastic element further comprises a groove lying in the central perpendicular plane of the element and which starts from that part which grips the legs. This groove is provided with an enlarged part at the inner end. The means also comprises a tongue-shaped profile to be connected to the wall-construction and which is provided with an outer enlarged part and which tongue-shaped profile is adapted to the form of

the groove in the elastic element.

According to a further characteristic of the invention, strips, pointed to the the groove can be axially applied in the elastic element. The longer edges of the strips are situated under the enlarged part of the groove. The strips diverge from the enlarged part of the groove starting from the said edges. The strips will snap over the enlarged part at the end of the tongue-shaped profile, establishing a more firm connection between the C-shaped profile and the wall-construction.

The means further comprise a pick-up element consisting of a mainly C-shaped pick-up part to pick up a seal profile adapted to the pick-up part and a leg connected to the C-shaped pick-up part. By the use of this leg, the pick-up element can be connected to the C-shaped profile after this has been attached to the panel, optionally by use of mastic.

The invention will be further described by means of the examples, as shown in the drawings in which: Figure 1 shows a cross-section of the wall-construction and the panel connected thereto.

Figure 2 shows the exploded view of the construction of Fig. 1

Figure 3 and Fig. 4 show slightly modified cross-sections according to Fig. 1 and Fig. 2.

The construction according to fig. 1 and fig. 2 comprises the panel 1, to which the C-shaped profile 2 has been connected by means of double-sided, closed cell adhesive tape 3 and a UV-proof silicone mastic 4.

In the case shown, the panel 1 comprises a double-glazed glasspanel, which is constructed single-glazed along the edges, so the part of the panel 5 will exist only locally.

The elastic element 6, taken by the C-shaped profile 2, is provided with lips 7 snapping onto the, to the inner wardly pointing ends 8 of the legs 9 of the C-shaped profile. In the element 6 there is a groove 10 having an enlarged part 11 whereas metalstrips 12 can be introduced into the element 6.

The wall-construction is composed of a number of profiles 13, 14 and 15, in particular made of aluminium, connected to each other by means of plastic parts (not shown) preventing cold bridge formation. The profiles 13 and 15 comprise a tongue-shaped profile 16 having an outer enlarged part 17 and a screw 18.

On the side-wall of the leg 9 of the C-shaped profile 2 is fixed the leg 19 of the pick-up element 20, which further comprises the C-shaped pick-up part 21 to take up part 22 of a sealing profile 23.

Part 22 further comprises a lip 24 and the under-lying sealing profile can be provided with lip 25. The above-lying pick-up part 21 can further be provided with a lip 26 to support panel part 5 by support blocks 27.

The leg 19 of the pick-up part 21 is provided with an extending part 28 which can be taken up by the

groove 29 in the side-wall of the leg 9 of the C-shaped profile 2.

The inner part of panel 1, which is opposite to part 5 of it, is supported by the C-shaped profile by support blocks 30. This inner part of the panel lies next to a sealing profile 31 which is connected to profile 15 of the wall-construction.

Fig. 3 and Fig. 4 show a construction that corresponds mainly to the construction of Fig 1 and Fig. 2. Only the pick-up element 20 is provided with an outwardly extending angle section 32 of which the vertical leg 33 snaps around the panel 1 so that this will be secured relative to the wall-construction.

Assembly of the construction is done as follows:

The C-shaped profile 2 is fixed to panel 1 by means of double-sided adhesive tape 3 and a layer of silicone mastic. On the inner face of panel 1, the lower edge is supported locally by blocks 30. The profile 2 extends around panel 1. After this has been done, the pick-up element 20 will be connected to the profile 2, e.g. by blind rivets and optionally blocks 27 are installed.

The projecting part 28 of the pick-up element 20 is taken up by the groove 29 of the C-shaped profile 2. Following this, the sealing profile 23 can be installed in the pick-up element 20. Now the elastic element 6 is introduced into the C-shaped profile and the construction can be transported to the assembly site.

Before assembling, screws 18 are loosened so that they will not hinder the fitting of the profiles 2 and 20. During installation of the panel, the elastic element 6 is pressed with its groove 10 into the leg 16, so that the outer enlarged part 17 will eventually be positioned into the groove 11.

The strips 12 contribute to a firm connection between the panel and the wall-construction. The elastic element 6 and the sealing profile 31 form the sealing between the surroundings and the interior of the structure.

Now the screws are tightened and the position of the panel 1 can be adjusted exactly, simultaneously a securing of the C-shaped profile 2 with respect to the wall, can be realised since the screws fit into the groove 29 of the C-shaped profile 2.

The lower parts of figs. 1 and 2 and also of figs. 3 and 4 illustrate the construction of a panel consisting of a single plate, e.g. a pane of glass, and which is positioned in front of another part of the wall-construction.

It will be clear that only a couple of possible embodiments of the method and the construction according to the invention are represented by the drawings and by the above description and that more modifications can be introduced without going beyond the idea behind the spirit and scope of the invention.

For instance, the parts of the wall-construction, to which the panel 1 is attached do not have to be fixed parts of the wall-construction. They may optionally be part of a door or of a window. Par example as shown in fig. 5 and 6.

Claims

1. Method for putting a structural glazing on a wall-construction, characterised in that

- a mainly C-shaped profile is fitted on that side of panel 1 which, in fixed position, is adjacent to the wall-construction, optionally by glueing
- in the profile 2 is fitted an elastic element 6 the form of which principally corresponds to the inner form of the profile 2 and provided with cams 7 which grip the inwardly pointing ends 8 of the legs 9 of the profile 2 to form a seal element which on the one hand lies against the outer surface of the ends of the legs 9 and on the other hand will be adjacent to the wall-construction after glueing
- the said elastic element 6 is provided with a groove 10 lying in the perpendicular bisectral plane of the element and starts from the seal element and which groove is provided near the inner end with an enlarged part
- the fixing of the panel 1 on the wall-construction is done by pressing the panel together with the C-shaped profile onto a tongue-shaped profile 16 which is extending from the wall-construction and which slots into the groove 10 of the elastic element 6
- the tongue-shaped profile 16 is provided with an enlarged part at the end that enters the enlarged part 11 of the groove 10
- the panel 1, by the use of the screws 18 of which the central axes are parallel to the plane of the panel and which are fixed into parts of the wall-construction, can be adjusted in its plane and simultaneously can be secured with respect to the wall-construction by turning the screws in a groove 29 fitted in that outwardly-facing, which respect to the panel 1, side wall of the leg of the C-shaped profile 2.

2. Method according to claim 1 characterised in that space between the panels 1 is sealed by means of fitting to the side wall of the C-shaped profile 2, outside the region where the screws 18 are located, a sealing profile almost perpendicular to the side wall such that two adjacent sealing profile form a resilient connection.

3. Method according to claims 1 or 2 characterised in that after glueing of the C-shaped profiles 2 to the panel 1, a pick-up element 20 will be connected to an outwardly facing side-wall of a leg 9 of the C-shaped profile 2, which pick-up element 20 consists of a mainly C-shaped pick-up part 21 to which a part 22 of the sealing profile is fixed and which part 22 comprises an outwardly extended lip 24 and in which the C-shaped pick-up part 21 is provided with a leg 19 extending along the side-wall of the leg of the C-shaped profile and by which it is connected to it.

4. Means for applying the method of claim 1 characterised in that it consists of

- a C-shaped profile 2 of which the side face of at least one of the legs 9 is provided with a groove 29
- an elastic element 6 of which the inner form of the C-shaped profile 2 and which comprises lips 7 able to clip onto the inwardly extended ends 8 of the legs 9
- a groove 10 lying in the central perpendicular plane of the element 6 and which starts from that part which grips the legs 9 of the profile 2 and which groove is provided with an enlarged part 11 at the inner end
- a tongue-profile 16 to be connected to the wall-construction, which is provided with an outer enlarged part 17 and which is adapted to the form of the groove 10, 11 in the elastic element 6.

5. Means according to claim 4 characterised in that strips 12, pointing to the groove 10 can be axially applied in the elastic element 6, the longer edges of these strips 12 are situated under the enlarged part of the groove; the strips diverge from the enlarged part 11 of the groove 10.

6. Means according to claims 4 and 5 characterised in that it comprises a pick-up element 20, consisting of a mainly C-shaped pick-up part 21, to pick up a seal profile 23 adapted to this seal profile 23 and a leg 19 connected to the C-shaped pick-up part 21.

Fig. 1

