(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 283 071**
A1

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **88200353.6**

(51) Int. Cl.[4]: **E04C 2/54**

(22) Date of filing: **25.02.88**

(30) Priority: **18.03.87 IT 2117087**

(43) Date of publication of application:
21.09.88 Bulletin 88/38

(84) Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI LU NL SE

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(54) Alveolar panel for windows or skylights.

(57) The alveolar panel (1) for windows or skylights is made from polycarbonate.

T he centre portion (2) is comprised between two end portion bearing a female element (8) and a male element (9) which are made from a polymeric material which is different from the polymeric material which constitutes the centre portion (2).

EP 0 283 071 A1

"ALVEOLAR PANEL FOR WINDOWS OR SKYLIGHTS"

The present invention is concerned with an alveolar panel for windows or skylights, made from polycarbonate. Said panel comprises a centre portion constituted by a couple of peripheral planes joined by a set of adjacent baffles, so to form alveoli having a triangular cross-section.

Said centre portion is comprised between two end portions bearing a female element and a male elements engaged by the corresponding elements associated with the adjacent alveolar panels.

At present, the alveolar panels for windows and skylights are made from polycarbonate resin by means of a single extrusion, which leads to monolithic panels provided with a centre portion at whose two ends the means for binding the same panel to the adjacent panels are provided.

But the monolithic structure is known to give the panel the same technical characteristics through all of its points, whilst it would be preferable, due to technical and economic reasons, that such characteristics are different from point to point.

The purpose of the present invention is to obviate the above drawbacks.

The alveolar panel for windows ot skylights made from polycarbonate resin, comprising a centre portion constituted by a couple of walls joined by a set of adjacent plates forming alveoli having a triangular cross-section, with said centre portion being comprised between a couple of end portions bearing binding elements, suitable for being engaged by the corresponding binding means associated with the adjiacent alveolar panels, is characterized in that said binding means are made from a polymeric material which is different from the polymeric material which constitutes the centre portion.

The advantages achieved by means of the present invention essentially consist in that by using different materials according to the different portions of the panel, it is possible to privilege the characteristics of transparency in the centre portion, and the characteristics of strength, flexibility, and adaptability, in the side portions which constitute the binding means for binding the panel to the thereto adjacent panels.

In practice, in as much as it is relatively easy to fulfil the characteristics of strength, flexibility and adaptability required for the side portion, in order to produce said side portions the use is possible of also recycled materials, or anyway of lesser value materials than the materials used for producing the centre portion of the panel, with the advantages that cheaper panels are manufactured.

The invention is disclosed in greater detail in the following, with the aid of the hereto attached drawing table, wherein Figure 1 shows a perspective view of a length of an alveolar panel.

By referring to the above cited Figure 1, the panel of the present invention, generally indicated by the reference numeral 1, is constituted by a centre portion 2 comprised between a couple of binding means constituted by a female element 8 and a male element 9. The central portion 2 is constituted by a couple of peripheral walls 4 and 5 joined by a set of adjacent baffles 6 forming alveoli 7 having a triangular cross-section.

The female binding element 8 shows a hollow 10 having a "C"-shaped cross-section, and the male element 9 has a protruding portion 11 having a circular cross-section.

Both the female element 8 and the male element 9 have a structure also constituted by alveoli 7 bounded by baffles 6.

The female element 8 and the male element 9 are obtained by co-extrusion, already joined to the centre portion 2 along a couple of planes 12. The material used for manufacturing the elements 8 and 9 is of polymeric nature, and can be selected, e.g., from the group consisting of: fibreglass-reinforced polycarbonate, recycled polycarbonates, ABS resins, polyethylene, polybutylene terephthalate.

The centre portion 2 is constituted, on the contrary, by polycarbonate to which a traditional U.V.-protecting substance is added.

Claims

1. Alveolar panel for windows or skylights made from polycarbonate resin, comprising a centre portion constituted by a couple of walls joined by a set of adjacent baffles forming alveoli having a triangular cross-section, with said centre portion being comprised between a couple of end portions bearing binding elements, suitable for being engaged by the corresponding binding means associated with the adjacent alveolar panels, characterized in that said binding means (8), (9) are made from a polymeric material which is different from the polymeric material which constitutes the centre portion (2).

2. Panel according to claim 1, characterized in that the centre portion (2) is constituted of polycarbonate, co-extruded with the polymeric material of the end portions (8), (9), bearing the binding means.

3. Panel according to the preceding claim, characterized in that the binding means are constituted by a male element (9) and a female element (8).

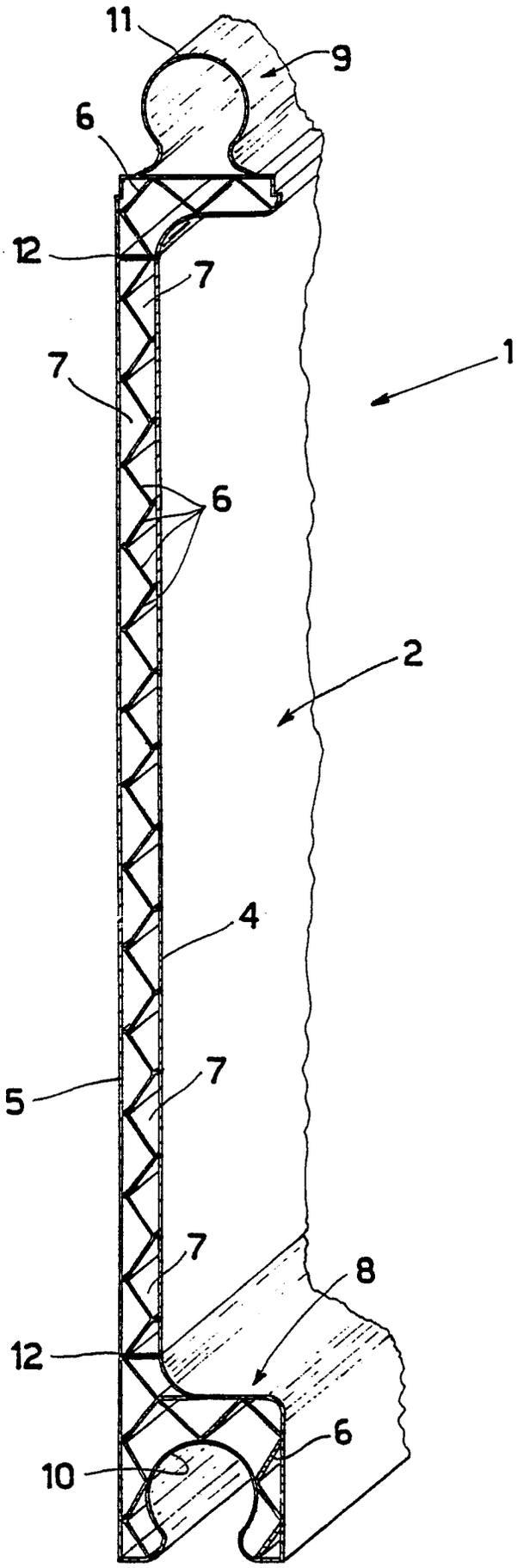

Fig.1

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EUROPEAN SEARCH REPORT

Application Number

EP 88 20 0353

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.4)
Y	GB-A-2 106 159 (MONTEDISON) * Whole document * ---	1-3	E 04 C 2/54
Y	US-A-4 182 582 (YOUVAL et al.) * Column 1, line 60 - column 2, line 30; figure 5 * -----	1-3	

TECHNICAL FIELDS SEARCHED (Int. Cl.4)

E 04 C
B 29 C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	15-06-1988	MYSLIWETZ W.P.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P0401)