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(54) **Structure for union of glass blocks in the construction of partition-walls and the like**

(57) The glass blocks (1) being of the type that present a perimetrical border (2) that delimits a cavity (3); the structure that is the object of the invention comprising a laminar profile (4) constituted by a laminar body (5) which, at its end zones includes corresponding pairs of projections (6), capable of being fitted inside the cav-

ities (3), finished off by borders (7) intended to be inserted between the perimetrical borders (2) of the glass blocks (1); and a tubular profile (8) provided with irregular projections (9) arranged at one of its sides and capable of insertion inside the cavity (3) of the perimetrical glass blocks (1), for constitution of a frame.

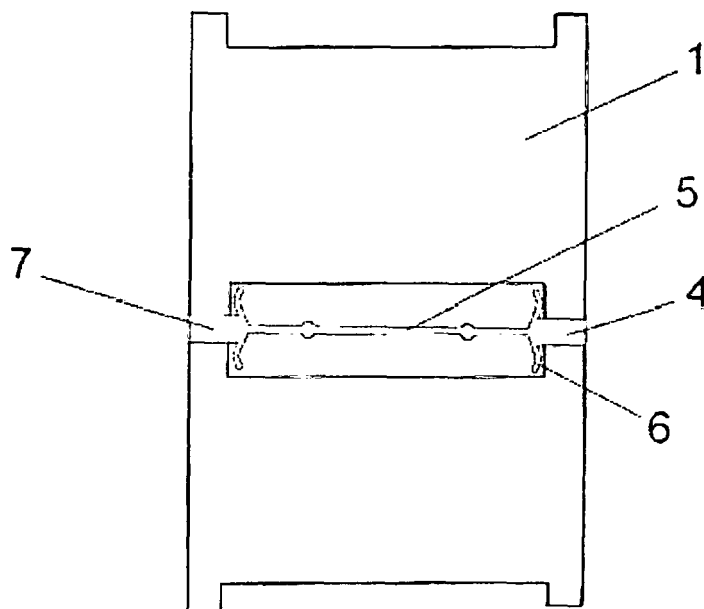


FIG. 2

Description

OBJECT OF THE INVENTION

[0001] The present invention refers to a structure that has been specially conceived for inter-coupling and attachment between glass blocks, of those generally used in the construction of translucent partition-walls, said structure immobilizing each block in transversal direction as regards adjacent ones.

[0002] The object of the invention is to obtain a simple structural solution, for a rapid and simple assembly which is furthermore, totally effective.

[0003] Consequently, the structure of the invention is to be found within the scope of construction materials.

BACKGROUND OF THE INVENTION

[0004] Different solutions are known for the union of glass blocks in the construction of partition-walls and the like, which are based on the use of profiles of large materials, such as wood, metals, etc.

[0005] One of these solutions is the one described by Utility Model U 200201318, the title holder being the actual applicant. The solution described in turn by European Patent 94924153 must also be pointed out.

[0006] These solutions are conceived for the construction of partition-walls based on conventional glass blocks, in the shape of prismatic boxes, with two hollow halves or cups attached to each other by means of their mouths. The main problem presented by these placement systems is that adhesive or sealant materials are used for the unions, which in consequence, require skilled labour and considerable installation time.

[0007] The union joints between blocks are aesthetically formed by the adhesive material employed or else by the guide profiles, in such a manner, that this aesthetic appearance is not totally desirable since they frame and hide important parts of the glass blocks.

[0008] A further problem is, that this type of partition-walls are frequently constructed for wet areas or for outside environment, and since they are exposed to water contact, especially when profiles that frame the blocks are used, there is the disadvantage of ingress of the water that runs over the wall of the block, inwards towards the interior of the profile through the union existing between them, which produces a moisture retention effect, with the consequent formation of fungal growth, the deterioration of the aesthetic appearance of the partition-wall, etc. due to which, the use of sealing systems that eliminate this possibility is recommended.

[0009] A type of glass block currently exists in the Market which presents its larger, or on-view sides extended through its four edges, defining a perimetrical border corresponding to each one of said sides, in such manner, that adjacent blocks are capable of directly contacting each other by said borders, providing the partition-wall with a visual effect of continuity, because, due to the cav-

ity formed between adjacent blocks, the union material is placed in said cavity and remains hidden from sight. On the other hand however, this union system requires greater amount of sealant or union material, with the consequent disadvantage involved, both from the point of view of material cost as from the required time of assembly.

DESCRIPTION OF THE INVENTION

[0010] The structure proposed by the invention is especially conceived for this type of glass blocks indicated in the previous paragraph, that is to say, for glass blocks provided with perimetrical borders corresponding to their larger sides, and solves in a totally satisfactory manner the previously indicated problem, permitting a rapid assembly of the blocks, permitted even if it is considered appropriate to separate the blocks from each other with a perfectly aesthetic finish.

[0011] For this, and more specifically, said structure is materialized into a practically laminar profile, of any appropriate material, as for example, aluminium or plastic, which, in correspondence with its longitudinal vertices or in their adjacent areas, include corresponding pairs of lateral projections, with angular or irregular profile, in such a manner, that these four profile projections are intended for a press fit inside the cavity with rectangular cross section defined by the coupling between the two adjacent glass blocks, immobilizing one and the other in transversal direction.

[0012] As from here, it is feasible to extend the laminar body of the profile at both sides past said irregular projections for inter-placement between the block borders, in such a manner, that instead of a visual continuity effect obtained in the previous case, a union with a perfect finish is now established which may present any thickness considered appropriate.

[0013] Obviously, a special profile is required to finish off the partition-wall perimetrically, that is to say, depending on their framework, which instead of being a laminate, is tubular, with rectangular cross section with two irregular projections at each one of their sides, the one that adapts to the corresponding block, coinciding in shape and position with the irregular projections of the previously indicated laminate profiles and the tubular body of the profile presenting a dimensional width that coincides with that of the type of glass block it is intended for.

[0014] As can be deduced from the described structure, the assembly of these profiles is extraordinarily rapid and simple, not requiring specially qualified personnel and offering full safety guarantees.

[0015] Furthermore, it must be also pointed out, that since the profiles remain inserted inside the internal cavity defined between blocks, when the borders of the blocks are not tinted, the colour of the profile is revealed through them with a very attractive aesthetic effect, giving the impression that the glass block is coated with metal, the opposite to what has been constructed up to now,

when said metallic appearance is achieved by metal coating the blocks around all their perimetrical area, which supposes a consumption of metal coating material and a complex industrial process which very considerably increases the block manufacturing costs.

DESCRIPTION OF THE DRAWINGS

[0016] In order to complement the above description and with the purpose of aiding to a better understanding of the characteristics of the invention, according to a preferred exemplary practical embodiment of the same, a set of drawings is enclosed, forming integral part of said description, in which, with illustrative and non limitative character, the following has been represented.

[0017] Figure 1 shows a pair of superimposed glass blocks, of the type that apply to the structure of the invention.

[0018] Figure 2 shows a similar representation to that of the previous figure, but in which the two blocks appear related by means of an intermediate profile that constitutes the basic element of the recommended structure.

[0019] Figure 3 shows a detailed cross sectional view of another type of profile that participates in the structure, the one intended to configure a lateral border or the perimetrical frame of the partition-wall.

[0020] Figures 4 and 5 finally show corresponding embodiment variants of the profile that participates in the assembly of figure 2.

PREFERRED EMBODIMENT OF THE INVENTION

[0021] Figure 1, as has just been described, schematically represents a pair of glass blocks (1) to which the union structure, that is the object of the invention, is applicable, and in which their larger sides are perimetricaly projected defining corresponding borders (2) in such a manner, that in the direct coupling between modules, as is shown in said Figure 1, intermediate cavities (3) with rectangular cross section, are defined.

[0022] Furthermore, in the structure of the invention, a profile (4) participates as main component, which is intended to be placed between adjacent blocks (1) as is represented in Figure 2, said profile (4) being materialized as a laminate body (5), with a width in accordance with the cavity (3) which, in its end zones includes corresponding pairs of projections and irregularities (6) intended to fit into the corresponding halves of the cavity (3) in such a manner, that the profile (5) acts as a key which immobilizes the blocks (1) in transversal direction.

[0023] As from this basic structure, the laminate body (5) of these profiles (4) is capable of being interrupted at their ends at the level of the cavity (3) ends, a possibility that is not represented in the drawings, in such a manner, that the glass blocks (1) directly contact each other at their marginal zones through their borders (2), as in the assembly represented in Figure 1, said profile (4) being capable of having lateral projections (7) intended to be

placed between the borders (2) of the blocks (1) as is shown in Figure 2, said border (7) being able to present a considerable thickness, as in the case of Figure 4, which may be considerably thinner, with a thickness equivalent to that of the laminate body (5) as has been represented in figure 5, in which they have been referenced with (7') or may present any other thickness considered appropriate depending on the thickness of the "slot" provided between blocks (1).

[0024] As has been previously indicated, the structure is complemented with a tubular profile (8), shown in figure 3, of rectangular cross section, with a width that coincides with that of blocks (1) and is provided, at the side that adapts to these, with a pair of irregular projections (9), similar to those of the base profile (4), those referenced with (6), and with the same aim of press fitting under a certain pressure inside the side groove of the blocks (1) defined at their borders (2).

[0025] The translucent nature of the blocks (1) permit that the angular or irregular projections (6) may be visible through the borders (2) in such a manner, that providing the profiles of the structure with an appropriate colour, a metallic effect is achieved for the block.

Claims

1. Structure for the union of glass blocks in the construction of partition-walls and the like, specifically for the union of blocks with their larger side perimetricaly extending into corresponding borders, also perimetrical, which, in the coupling between modules define rectangular prismatic cavities, **characterized in that** it is constituted by means of two types of profiles, a laminate base profile, provided at its ends with corresponding pairs of projections, irregular and lateral, intended to press fit inside the corresponding halves of the cavity defined between blocks, and a second type of profile intended to constitute the finishing-off of the edges along all the perimeter of the partition-wall, provided with a tubular body with a width in accordance with that of the glass blocks and provided at the side that adapts to the latter, with a pair of irregular projections similar to the previous ones, press-coupled between the borders of the immediately adjacent blocks.
2. Structure for the union of glass blocks in the construction of partition-walls and the like, according to Claim 1, **characterized in that** the laminate body of the main profile is capable of being interrupted at the level of the irregular side projections, when a direct coupling between the glass blocks is planned, which directly contact through their borders, or else, said laminate body projects past said irregular projections, defining end sections with variable thickness as required, which extend up to the level of the external sides of the blocks and which act as separators

or "slots" between their borders.

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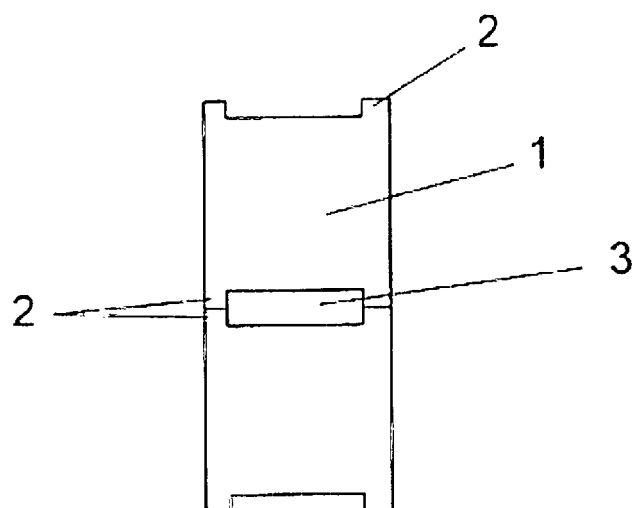


FIG. 1

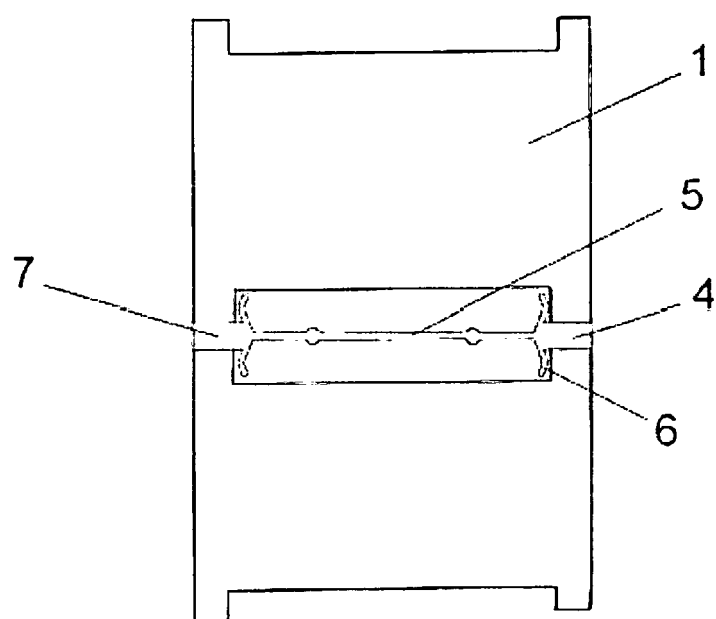


FIG. 2

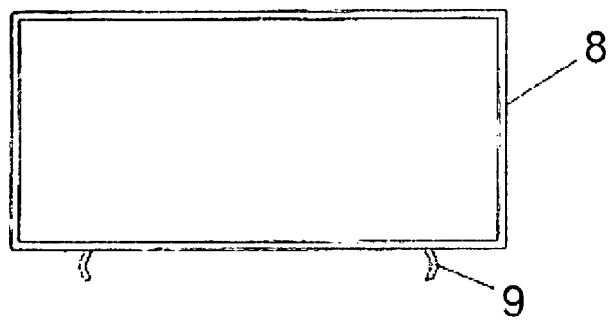


FIG. 3

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP 94924153 A [0005]