ABSTRACT

(EN) The invention relates to a device for fixing thin elements to facades, particularly thin modular elements made of porcelain or other materials to be fixed to ventilated facades, using suspension sections which are intended to be fixed to the elements made of porcelain or other materials. The invention is characterized in that the suspension sections include a tongue which is shaped and dimensioned such that it can be coupled to the horizontal support section that is fixed to the vertical installation surface.
DEVICE FOR FIXING THIN ELEMENTS TO FACADES

PURPOSE OF THE INVENTION

[0001] This invention relates to a device for fixing thin elements to facades, that essentially has novelty characteristics and notable advantages with respect to known methods and the methods used for the same state-of-the-art purposes.

[0002] More specifically, the invention proposes the development of a device specially designed to affix thin modular elements made of porcelain or other materials, to be used in ventilated facades and applied on newly constructed facades and when renovating existing ones.

[0003] The field of application of the invention is obviously within the industrial construction sector in general and specifically for ventilated facades.

BACKGROUND DOCUMENTS AND SUMMARY OF THE INVENTION

[0004] Current state-of-the-art includes creating systems for fixing thin porcelain elements, or other material, made to coat facades to create the mentioned ventilated facades, in which modular coating elements are left at a certain distance of the interior or original facade. These devices may be mechanical, with

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[0005] chemical adhesives or a combination of both, so that it holds the part affixed to the support elements or substructure, to form the ventilated facade.

[0006] In general, creating fixing devices for modular elements to be used in the construction of ventilated facades known by the inventor, have many drawbacks, all which derive from the difficulty of holding a thin element reliably and especially in the case of mixed mounting or mounting with adhesive where machining is needed on the parts prior to mounting, making it especially difficult when dealing with elements that must be adapted to the project.

[0007] The fixing element for modular elements in ventilated facades which is the object of the invention, consists of a section with a surface that is wide enough to ensure perfect adherence, and a tab (at the top or bottom according to the position of the part) along the entire length that acts as a support along the base of the part, making sure it doesn’t fall due to gravity, making it a mechanical fix and therefore avoiding that the glue work continuously against shear strength, which can cause wear on the resistance of the adhesive material, in this type of device the glue only has to support the suction loads which are sporadic and for which the adhesive glue results to be sufficient.

[0008] The fixing device for porcelain elements and other material mentioned in this invention is also characterized because each element is designed in a way that in the gluing area there are push-out edges that ensure

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[0009] that at the moment these make contact with the ceramic element or another material to which they are adhering, the quantity or dose of the glue will be correct, so that if a decision is made to increase pressure on the section, the shape at the ends will prevent the loss of necessary glue, therefore keeping the specific quantity.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The attached drawings include, but are not limited to, a method of creating the fixing device for thin modular elements in ventilated facades proposed for the invention. In the drawings:

[0011] FIG. 1, is a sectional view of the hook sections of the invention’s system;

[0012] FIG. 2, is a sectional view that shows the joining of the device to the modular part in greater detail, as well as the way it hangs onto the horizontal section;

[0013] FIG. 3, is an elevated view of the suspension parts showing the grooves made for more adherence of the fixing glue, and

[0014] FIG. 4 is a perspective schematic view of two sections made according to the invention, in positions that are comparable to those shown in FIG. 1.

DESCRIPTION OF THE PREFERRED FORM OF REALIZATION

[0015] The fixing device for porcelain elements or other elements in ventilated facades that are the object of this invention described below as an example for

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[0016] realization, includes the suspension sections (1) and (2) that are joined to the thin porcelain parts (6) or other material using the support blade (3) to support the permanent gravitational loads of the parts (6), hung to the sections (7) with the hook (5), and the guide blade (4) which also, in the section (9) that joins the section (2) with the part (6) includes glue, therefore avoiding that it falls due to the suction effect on the facade.

[0017] FIG. 1 shows the proportion and shape of the fixing sections, emphasizing supports (3) and (4) and the hooks (5) which are elements that characterize the invention.

[0018] FIG. 2 shows the group of the mutually coupled elements, and the way they are interconnected, so that the top part (6) is joined to the part (1) with the glue added to the area (10) and the part (6) is joined to the part (2) from the bottom part to the front part with the glue that is added to the area (9), and at the same time, parts (1) and (2) are hooked to the horizontal section (7) which is joined to the vertical surfaces with screws (8).

[0019] FIG. 3 shows an end view of the back area of the sections (1) and (2) with the contact grooves formed in sections (9) and (10) to apply the glue to adhere to the modular porcelain elements (6), and which emphasize the hooks (5) anchored on the section tabs 2. In this form of realization, the sections that join to the porcelain parts (6) or other materials, have been indicated as (1bis) and (2bis), and have been shown equipped with a flange (11) in the support blades

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[0020] TM3 (3) and (4) and projected in orthogonal shape with respect to the mentioned blades on a parallel level with the body of the section itself, and at a preset distance from the latter. These
tabs allow them to be inserted inside the additional grooves made on the longitudinal edges of the porcelain elements (6), which gives an increased hold of the parts in their set position.

Lastly, FIG. 4 includes a side view of a practical form of implementing the suspension sections (1) and (2), which shows the constructive details that characterize these sections, appearing in faced and parallel positions, separated from one another, in the same situation as the schematic shown in FIG. 1.

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1. Device for fixing elements to facades comprising, particularly thin modular porcelain elements or other material, in ventilated facades, using suspension sections (1, 2) which are intended to be fixed to porcelain elements (6) or other material, which is characterized because the mentioned suspension sections (1, 2) include a tongue (5) which is shaped and dimensioned such that it can be coupled to the horizontal support section (7) that is fixed to the vertical installation surface. Also, the mentioned suspension sections (1, 2) which are equipped with a blade portion (3, 4) on its longitudinal edge that according to the position of the section, has a lower longitudinal support along the entire length of the base of the porcelain piece (6) or a guide effect over the top edge of this piece, respectively.

2. Device, according to claim 1, characterized because the suspension sections (1, 2) include in the contact area (9, 10), along with the modular porcelain elements (6), a longitudinal groove to apply the glue to the corresponding porcelain element (6).

3. Device according to claim 1, characterized because optionally, the suspension sections (l'bis, 2bis) include in the respective blade areas (3, 4), an orthogonal-shaped tab (11), sized and configured to be inserted into a matching groove.

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made at the longitudinal edge of the modular porcelain elements (6).

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