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(54) **Piece for assembling panels to structures**

(57) The present invention relates to a piece for assembling panels to structures for siding and cladding of stands. The piece object of the invention is constituted by plates that can be joined on one of their faces to a connection piece and on their other face to one or more panels of the structure through orifices made in the plate, through which are inserted screws or any similar means of attachment. The invention is characterised in that the orifices of the plate have a larger diameter than the means of attaching the modular panels and the plate, also having means for securing the relative position of the panel or panels with respect to the plate.

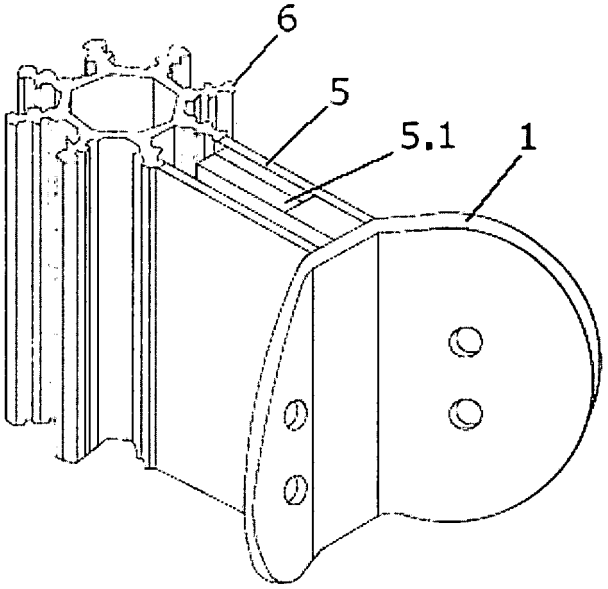

FIG.4

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Description

OBJECT OF THE INVENTION

[0001] The present invention relates to a piece for assembling panels to structures for siding and cladding of stands.

[0002] The piece object of the invention is constituted from plates that are joined on one of their faces to a connection piece and on their other face to a panel or panels of the structure through orifices of the plate in which are inserted screws or any similar means of attachment.

[0003] The invention characterises the fact that the plate orifices have a diameter greater than that of the means of attachment between the modular panels and the plate, and also has means for securing the relative position of the panel(s) with respect to the plate.

BACKGROUND OF THE INVENTION

[0004] Pieces are known for assembling panels to temporary structures such as stands for fairs and conventions. These structures require means to allow their quick assembly and disassembly.

[0005] The applicant holds a number of records incorporating a longitudinally flapped union piece between the grooves of which is inserted the end of an attachment piece in the form of a clip hinged on one of its ends. On the opposite end of said clip is a discoid plate with lugs on which the panel(s) is (are) placed and attached.

[0006] However, the above-described system has the disadvantage that it does not allow absorbing the small maladjustments that appear between consecutive panels attached to the same assembly piece, such as misalignments.

[0007] Another object pursued by the present invention is that the visible surface of the panels conceal the means of union to the plate as much as possible.

[0008] The present invention solves the aforementioned drawbacks by means that allow absorbing deviations and maladjustments between consecutive panels anchored to the same plate.

DESCRIPTION OF THE INVENTION

[0009] The present invention relates to a piece for assembling panels to structures for siding and cladding of stands.

[0010] The assembly pieces in which the invention lies are constituted by plates that can be circular, oval or in any other shape that are joined on one of their faces to a connection piece and on their other face to one or more panels of the structure through orifices made in the plate, through which are inserted screws or any similar means of attachment. The connection pieces may be of the type having a clip hinged on one of its ends. Each plate can be joined to one or more panels of the structure, depending on the number of orifices it has and on the shape of the panels themselves.

[0011] The piece object of the invention is characterised in that the orifices of the plate have a larger diameter than the means of union between the modular panels and the plate, also having means for securing the relative position of the panel or panels with respect to the plate.

[0012] As there is a degree of play between the means of attaching the panels to the plate and its orifices due to their different diameters, it is possible for said means, and therefore the panels associated to them, to be placed in different positions. The assembly piece of the invention has means allowing to secure said position such that it allows absorbing deviations and misalignments between the panels at the time of assembling them.

DESCRIPTION OF THE DRAWINGS

[0013] The present descriptive memory is completed by a set of drawings that illustrate the preferred embodiment and in no way limit the invention.

Figure 1 is a schematic plan view of the panel and the plate on the visible side of the panel.

Figure 2 is a schematic plan view of the panel and the plate on the concealed side of the panel.

Figure 3 is a cross section of the plate and the panel at the area of union of the two elements .

Figure 4 is a schematic perspective view of the plate with its angled flaps and the connection piece.

Figure 5 is a schematic perspective view of the plate and the connection piece for an angled positioning.

PREFERRED EMBODIMENT OF THE IVENTION

[0014] Figure 1 shows a plate (1), in this case circular, with orifices (1.1). These orifices (1.1) have a larger diameter than the means of attaching the plate (1) to the panels (2). In a preferred embodiment said attachment means consist of screws (2.1) which in combination with nuts (2.2) attach said piece (1) to the panels (2).

[0015] Figure 2 shows the plate (1) and the panel (2), not showing the attachment piece (5) for the sake of clarity.

[0016] In the preferred embodiment the means that allow securing the relative position between the plate (1) and the panel (2), that is, between the screw (2.1) associated to the panel (2) and the orifice (1.1) associated to the plate (1), consist of a combination of the following elements:

[0017] The nuts (2.2) have a head (2.2.1) that acts as a stop against an essentially U-shaped piece (3) or the like that embraces the nut (2.2) and is trapped between the nut head (2.2.1) and the plate (1), thereby securing the position of the screw (2.1) with respect to the orifices

(1.1) of the plate (1) and therefore that of the panels (2) with respect to the plate (1).

[0018] The essentially U-shaped piece (3) can adopt other configurations in which one of the legs of the "U" is extended by a narrowing, so that it is also clipped on the nut (2.2).

[0019] In the preferred embodiment the orifices (1.1) are recessed into the panel (2), so that there is a separation between the plate (1) and the panels (2).

[0020] To embellish the exposed face of the panels (2), the screws (2.1) have a conical end (2.1.1) combined with a recess of the panel (2) for their insertion. Above the conical end (2.1.1) is placed a decorative cap (4), so that the attachment means cannot be seen in the exposed faces of the panels (2).

[0021] The nut (2.2) for attaching the plate (1) to the panel (2) has two parallel planes in its central segment that favour the entry of the U-shaped piece (3) and prevent the rotation of the nut (2.2).

[0022] Figure 4 shows a plate (1), which in this embodiment is oval in shape, with its wings forming an angle that can be either acute or obtuse, so that two or more panels may be joined at said angle. This figure shows the attachment piece (5) which in this embodiment houses a hinged clip (5.1) and is joined to the plate (1) at one of its ends and to a grooved piece (6) at its other end.

[0023] Similarly, figure 5 shows a configuration in which the connection piece (5) also houses a hinged clip (5.1) and has its ends (5.2, 5.3) at an angle, as seen in the figure, thereby allowing to join the panels (2) to the discoid piece (1) to form a specific angle to the vertical plane of the structure.

Claims

1. Piece for assembling panels to structures, constituted by plates (1) that are joined on one of their faces to an attachment piece (5) and on their other face to one or more panels (2) of the structure through orifices (1.1) of the plate (1), through which are inserted securing means, **characterised in that** the orifices (1.1) of the plate (1) have a larger diameter than the diameter of the means for attaching the modular panels (2) to the plate (1), also having means for securing the relative position of the panels (2) with respect to the plate (1).

2. Piece for assembling panels to structures, according to claim 1, **characterised in that** the means for attaching the panels (2) and the plate (1) consist of screws (2.1) in combination with nuts (2.2) with at least one head (2.2.1).

3. Piece for assembling panels to structures, according to claim 2, **characterised in that** the means for securing the relative position of the panels (2) and the plate (1) consist of an essentially U-shaped piece (3) or the like that embraces the nut (2.2) and is placed between the head (2.2.1) of the nut (2.2) and the plate (1).

4. Piece for assembling panels to structures, according to claim 2, **characterised in that** the panel (2) has a recess in its exposed face for inserting the head of the screw (2.1).

5. Piece for assembling panels to structures, according to claim 2, **characterised in that** the attachment screws (2.1) have a conical head (2.1.1).

6. Piece for assembling panels to structures, according to claim 2, **characterised in that** the head (2.1.1) of the screw (2.1) has a decorative cap (3) in the exposed face of the panel (2).

7. Piece for assembling panels to structures, according to claim 2, **characterised in** two of the walls of the nut (2.2) are flat for securing the U-shaped element (3).

8. Piece for assembling panels to structures, according to claim 1, **characterised in that** the orifices (1.1) are recessed into the panel (2).

9. Piece for assembling panels to structures, according to claim 1, **characterised in that** the wings of the plates (1) form an angle.

10. Piece for assembling panels to structures, according to claim 1, **characterised in that** the end walls (5.2, 5.3) of the attachment piece (5) form an angle.

11. Piece for assembling panels to structures, according to claim 1, **characterised in that** the attachment piece (5) is one of those having a hinged clip (5.1) on one of its ends.

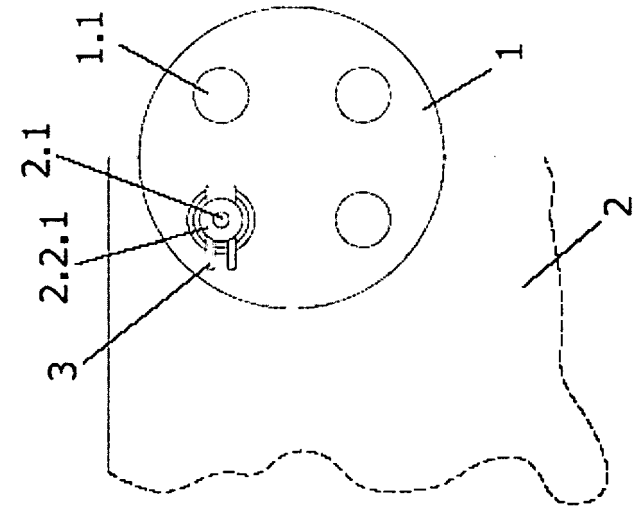

FIG.2

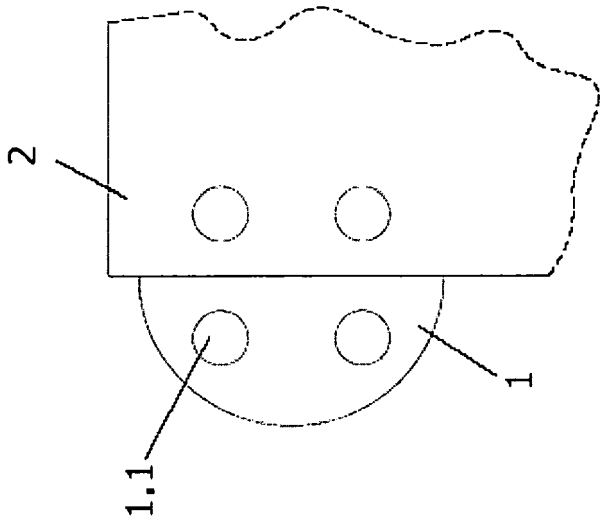

FIG.1

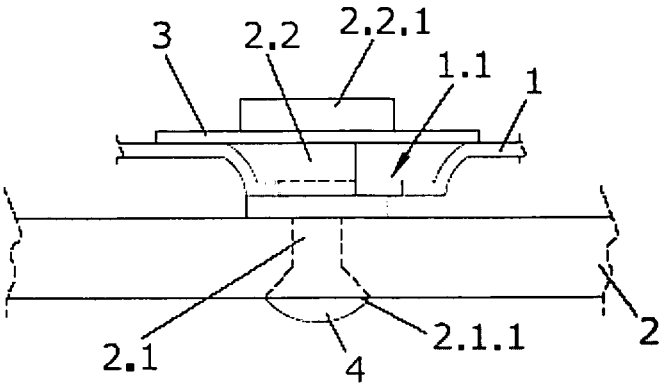

FIG.3

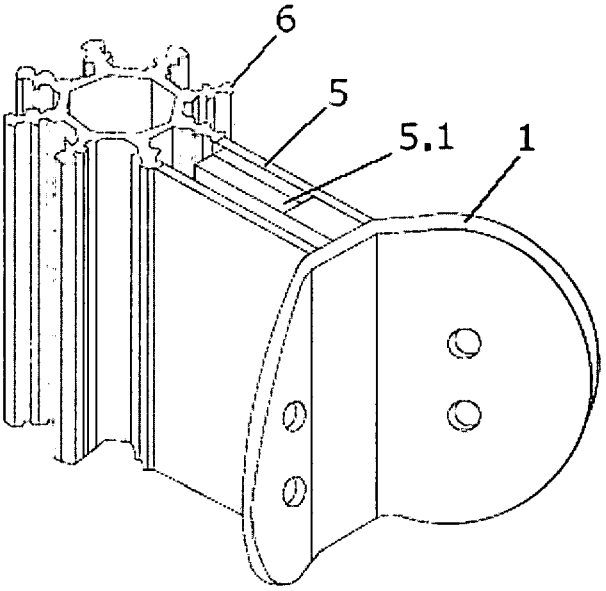

FIG.4

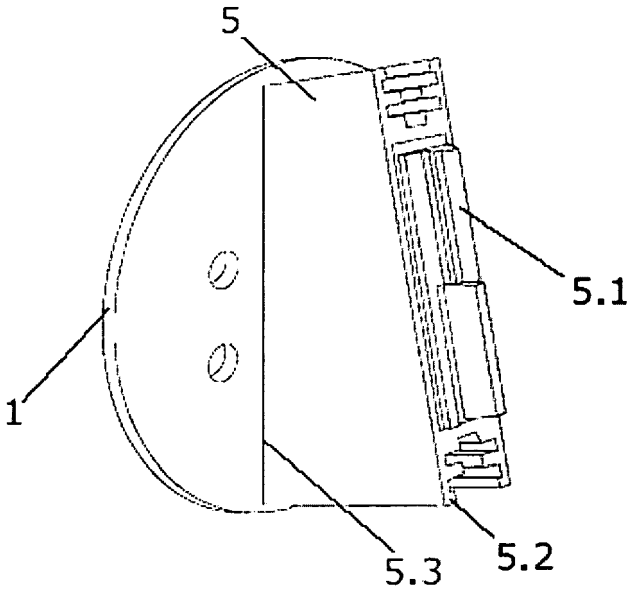

FIG.5

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EUROPEAN SEARCH REPORT

Application Number
EP 06 38 1037

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X	DE 26 19 872 A1 (MAYERHOFER EDVIN SVEN) 18 November 1976 (1976-11-18) * figure 1 *	1-11	
			TECHNICAL FIELDS SEARCHED (IPC) E04H E04B F16B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	29 January 2007	HALLER, E

CATEGORY OF CITED DOCUMENTS

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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