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(54) **FRONT PLATE FOR ADVERTISING PANELS USED IN SPORTS GROUNDS**

(57) The invention relates to a front plate for advertising panels used in sports grounds, intended for panels formed by LEDs which are used for light displays. The plate is formed by joining small plates (2) made from a flexible plastic material and have a distribution of rows of holes (5) corresponding with the distribution of the LEDs on the advertising panel, visors (8) made from the same flexible plastic material as the small plate projecting above the rows of holes (5), whereas grooved areas (9) are defined parallel to those rows of holes (5).

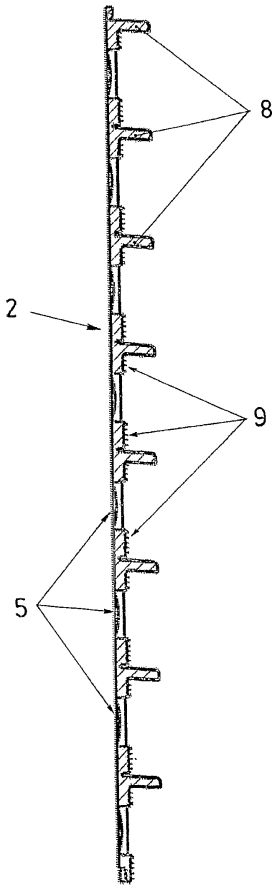

Fig. 3

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Description

Field of the Art

[0001] The present invention relates to the static advertising arranged around sports grounds, proposing a front covering for the advertising panels used in said advertising, said covering having features making it advantageous in the functional aspects of assembly and safety.

State of the Art

[0002] The practice of placing advertising panels around sports grounds and particularly arranging said panels at ground level so that the advertising is in an optimal position to be seen by spectators of the events taking place in the sports grounds, even through televised broadcasts of the events, is known.

[0003] Embodiments of advertising panels in which the advertising is shown by means of light compositions using LEDs activated by means of an electronic control to form illustrative combinations of the depictions to be displayed are known for such purpose.

[0004] Due to the fragility of LEDs, they are arranged in the mentioned advertising panels with a front protection formed by a metal plate provided with holes to allow passage of the light of the LEDs, said plate being secured by means of anchoring screws on the structure of the panel, whereas protective visors are arranged in relation to the outlet holes for the light of the LEDs preventing external light incidents from being able to affect the clarity of the advertising displays.

[0005] Both the heads of the screws for securing that front metal plate of the advertising panels and the protective visors of the outlet holes for the light of the LEDs in the mentioned advertising panels used in sports grounds entail a serious danger for athletes participating in the events due to the risk of cuts and injuries that may occur when the athletes impact against those advertising panels.

Object of the Invention

[0006] According to the invention a front plate is proposed for the mentioned advertising panels used in sports grounds, whereby determining effective protection of the light LEDs of said panels, eliminating the risks of danger that conventional panels of this type entail.

[0007] This plate object of the invention is formed by a composition by means of small modular plates made from plastic determining coupling shapes at the edges which allow an assembly between the consecutive small plates forming a continuous assembly which configures the appearance of a single plate.

[0008] The small plates are provided with holes distributed in rows according to the position of the LEDs of the panel for the passage of the light of said LEDs for the luminous configuration of the advertising displays with said LEDs, said holes being defined with opening bevels in the part of the outer face of the small plates, thus determining an expansion of the outlet of the holes favoring the projection of the light from the LEDs.

[0009] Flanges in the form of visors further project above the distributed rows of holes on the outer face of the small plates, which visors form a protection that prevents the entrance of rainwater into the holes, whereas grooved areas are defined on said outer face of the small plates parallel to the rows of holes which prevent reflections from being able to alter the observation of the light displays of the panel.

[0010] In the arrangement on the panel, the small plates forming the front plate are fixed by means of removable bonding, for example with a two-sided adhesive sheet or any other similar solution.

[0011] A plate is thereby obtained which is very easy to assemble on the advertising panels and it can be formed in an aesthetic manner according to the measurement of advertising panel by means of coupling on necessary small plates.

[0012] Fixing the small plates forming the plate by means of bonding as well as the constructive formation thereof in a plastic material on one hand determine very notable safety conditions because there are no screw heads that can cause injuries insomuch as the visors of the front face and the body of the small plates have a certain flexibility that allows absorbing energy when an athlete impacts against the panel, thereby preventing serious injuries.

[0013] The formation of the plate using independent small plates joined to one another further allows being able to repair worn parts by replacing the worn small plates without having to replace the entire plate.

[0014] Therefore said plate object of the invention has certainly advantageous features, having its own identity and preferred character for the function of covering the front of advertising panels used in sports grounds for which it is intended.

Description of the Drawings

[0015]

Figure 1 shows a view from the front face of a small plate for forming the plate object of the invention.

Figure 2 is a corresponding top plan view of the small plate of the previous figure.

Figure 3 is an enlarged view according to section III-III indicated in Figure 1.

Figure 4 is an enlarged detail of a partial area of a small plate seen from the outer front face.

Figure 5 is a perspective view of a plate formed with four small plates seen from the front face.

Figure 6 is a perspective view of the previous plate seen from the rear face.

Figure 7 is a perspective view of the same plate with the small plates forming it slightly separated in a cor-

relative coupling position with respect to one another.

Figure 8 is an enlarged perspective view of a detail of a partial area of attachment in the lateral direction between two small plates, with the small plates separated in the correlative coupling position.

Figure 9 is an enlarged perspective view of a detail of a partial area of attachment in the longitudinal direction between two small plates, with the small plates separated in correlative coupling position.

Figure 10 is a cross-section view of an enlarged detail of the attachment in the lateral direction between two small plates.

Figure 11 is a cross-section view of an enlarged detail of the attachment in the longitudinal direction between two small plates.

Figure 12 is a partial perspective view of the arrangement of a front plate according to the invention on an advertising panel, with a small plate of the makeup of the plate separated towards the front.

Detailed Description of the Invention

[0016] The object of the invention relates to a front covering plate for advertising panels arranged around sports grounds and comprising a combination of LEDs to form light displays, said plate having structural features making it functionally advantageous for the mentioned application.

[0017] The proposed plate comprises a structural assembly (1) which is formed by joining small plates (2) made from plastic material which are coupled to one another forming the assembly of the plate according to the necessary dimension for the advertising panel (3) for which the application is intended.

[0018] The small plates (2) forming the plate determine shapes (4.1) at the end edges which allow establishing an assembly coupling between the consecutive small plates (2) in that direction, whereas the side edges have other shapes (4.2) which in turn allow establishing assembly coupling between consecutive small plates (2) in that direction, such that by means of coupling small plates (2) in one direction and the other, a composition can be formed with the dimension of the structural assembly (1) necessary for any advertising panel (3), the joining between the small plates (2) determining a single plate.

[0019] Said small plates (2) are further provided with holes (5) distributed in alignments corresponding with the distribution of the LEDs (6) of the advertising panels (3), such that in the front covering of an advertising panel (3) by means of the proposed plate, the holes (5) of the small plates (2) forming it coincide with the front of the different LEDs (6) of said advertising panel (3), allowing the passage of the light of those LEDs (6) so that the light display compositions formed therewith are visible.

[0020] Said holes (5) show opening bevels (7) at the outer face of the small plates (2), determining an outlet with increasing widening for those holes (5), this favoring the diffusion of the light of the LEDs (6) in the exit towards the outside.

[0021] Visors (8) serving as protection to prevent rainwater from entering the holes (5) project on the front face of the small plates (2) above the rows of the holes (5), said visors (8) in turn acting as screens to prevent external light incidents from affecting the visibility of the light of the LEDs (6) and therefore the clarity of observation of the light displays formed in the advertising panel (3).

[0022] Grooved areas (9) are further defined on the front face of the small plates (2) parallel to the rows of LEDs (6) which prevent reflections of external light on the surface of said front face of the small plates (2) which can affect the clarity of observation of the displays formed by means of the light of the LEDs (3).

[0023] The visors (8) are formed by the same plastic material as the small plates (2), integrally with the latter, such that the structural assembly (1) of the front covering plate of the advertising panels (3) has a flexible formation, determining safety conditions for using these advertising panels (3) in sports grounds in the sense that if an athlete impacts against the mentioned advertising panels (3), the constitution of the front plate thereof allows said plate to yield, absorbing the energy of the impact, and to not be a resistant means that can cause injuries due to cuts and blows.

[0024] Fixing the small plates (2) on the advertising panel (3) is done by bonding with a removable means, such as a two-sided adhesive sheet or any other conventional means having similar features, such that screws the heads of which can also cause injuries due to cuts, blows and rubbing against them when athletes impact against the advertising panels (3) are not used for the fixing.

[0025] Fixing the small plates (2) by means of removable bonding further allows an easy assembly thereof to form the structural assembly (1) of the front plate on the advertising panels (3) as well as replacing worn small plates (2) without having to disassemble and replace the entire structural assembly (1) of the corresponding plate.

Claims

1. A front plate for advertising panels used in sports grounds, used to cover the front face of advertising panels (3) comprising a distribution of LEDs (6) which are used for light displays, **characterized in that** it comprises a structural assembly (1) formed by joining small plates (2) made from a flexible plastic material which are coupled to one another determining a structural assembly (1) in the way of a single plate, the small plates (2) having a distribution of holes (5) forming rows corresponding with the distribution of the LEDs (6) of the advertising panel (3), visors (8) projecting on the front face above the rows of holes (5), whereas grooved areas (9) are defined on said front face parallel to the rows of holes (5).

2. The front plate for advertising panels used in sports grounds according to claim 1, **characterized in that** the visors (8) are formed integrally with the respective small plates (2) by means of the same flexible plastic material used for making them.

3. The front plate for advertising panels used in sports grounds according to claim 1, **characterized in that** the holes (5) determine an outlet widening by means of bevels (7) on the front face of the small plates (2).

4. The front plate for advertising panels used in sports grounds according to claim 1, **characterized in that** the small plates (2) have shapes (4.1) at the end edges by which assembly coupling is established between the consecutive small plates (2) which are attached in the longitudinal direction.

5. The front plate for advertising panels used in sports grounds according to claim 1, **characterized in that** the small plates (2) have shapes (4.2) at the side edges by which assembly coupling is established between the consecutive small plates (2) which are attached in the lateral direction.

6. The front plate for advertising panels used in sports grounds according to claim 1, **characterized in that** the small plates (2) forming a front covering plate of an advertising panel (3) are fixed on the advertising panel (3) by means of removable bonding.

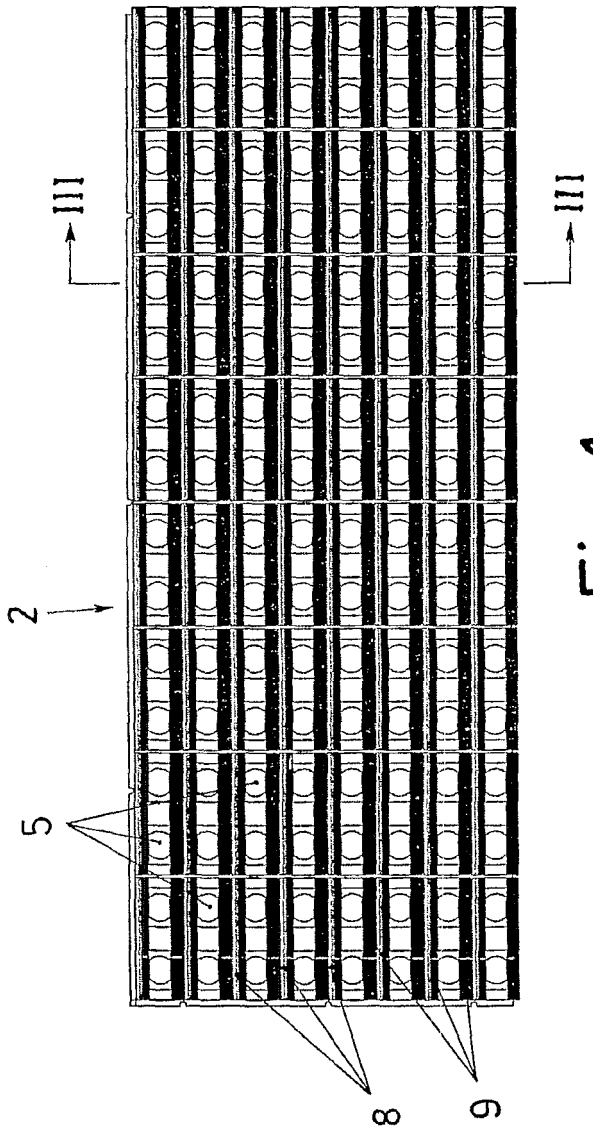

Fig.1

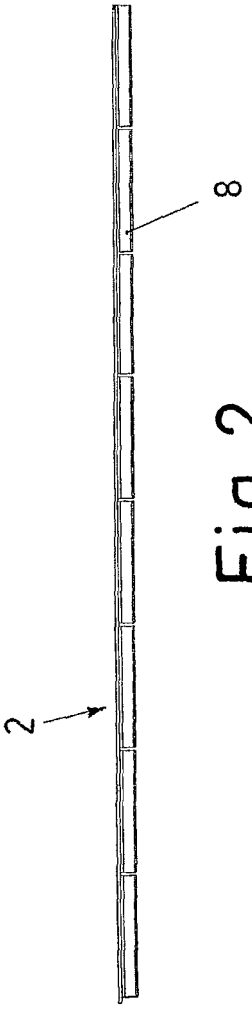

Fig.2

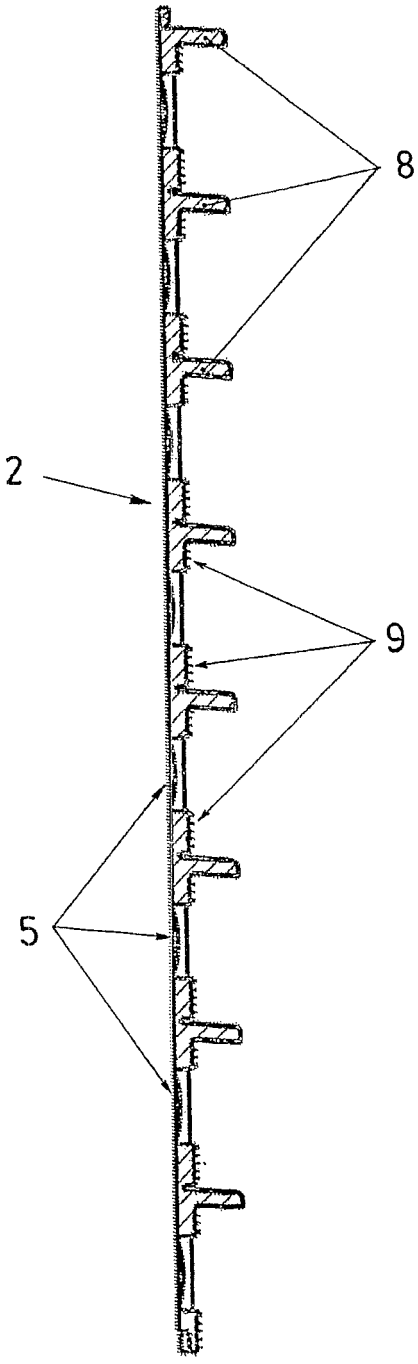

Fig. 3

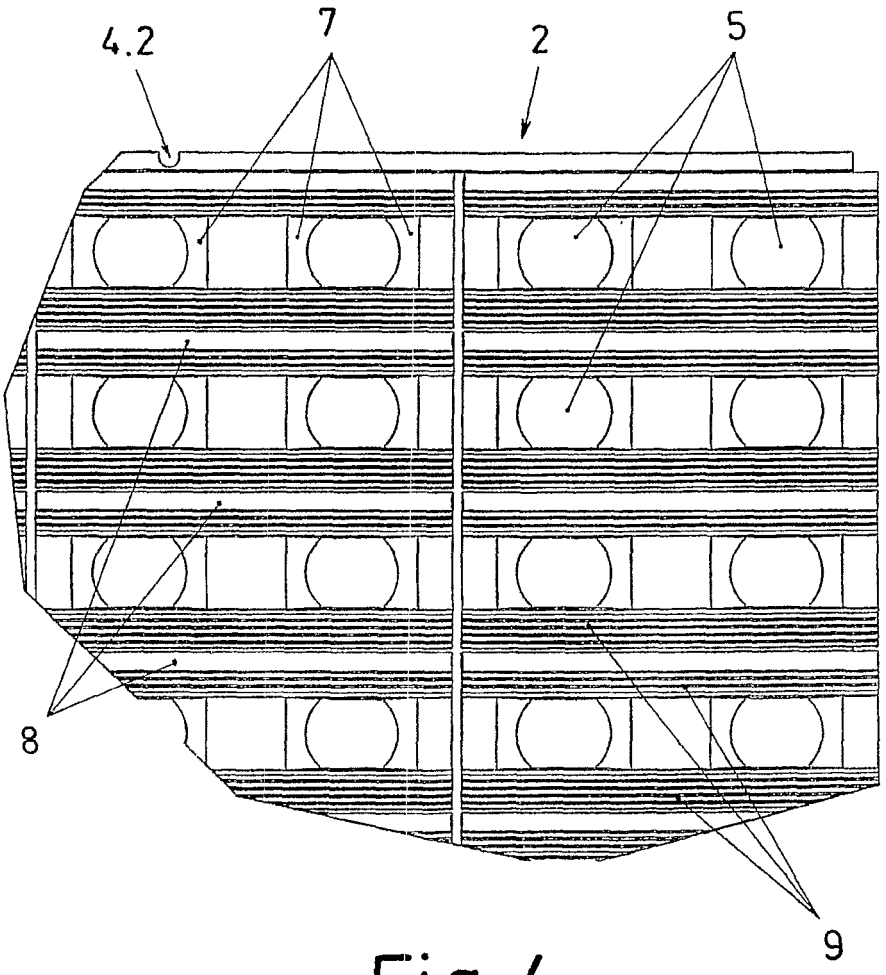

Fig. 4

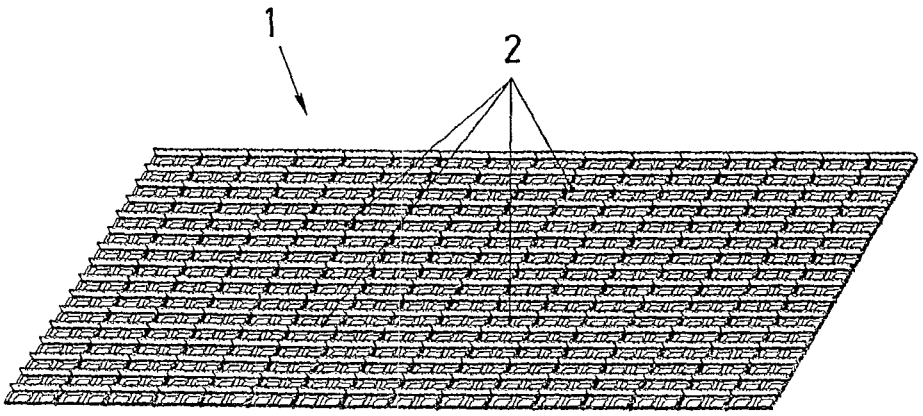

Fig.5

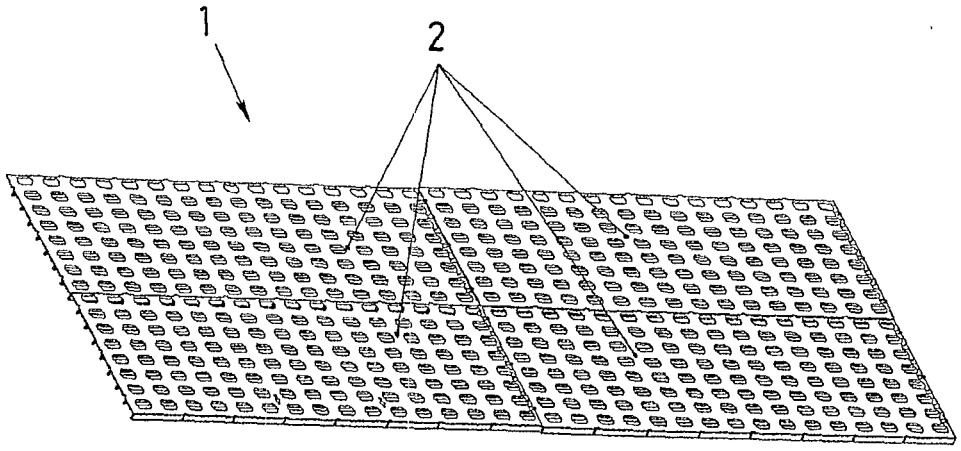

Fig.6

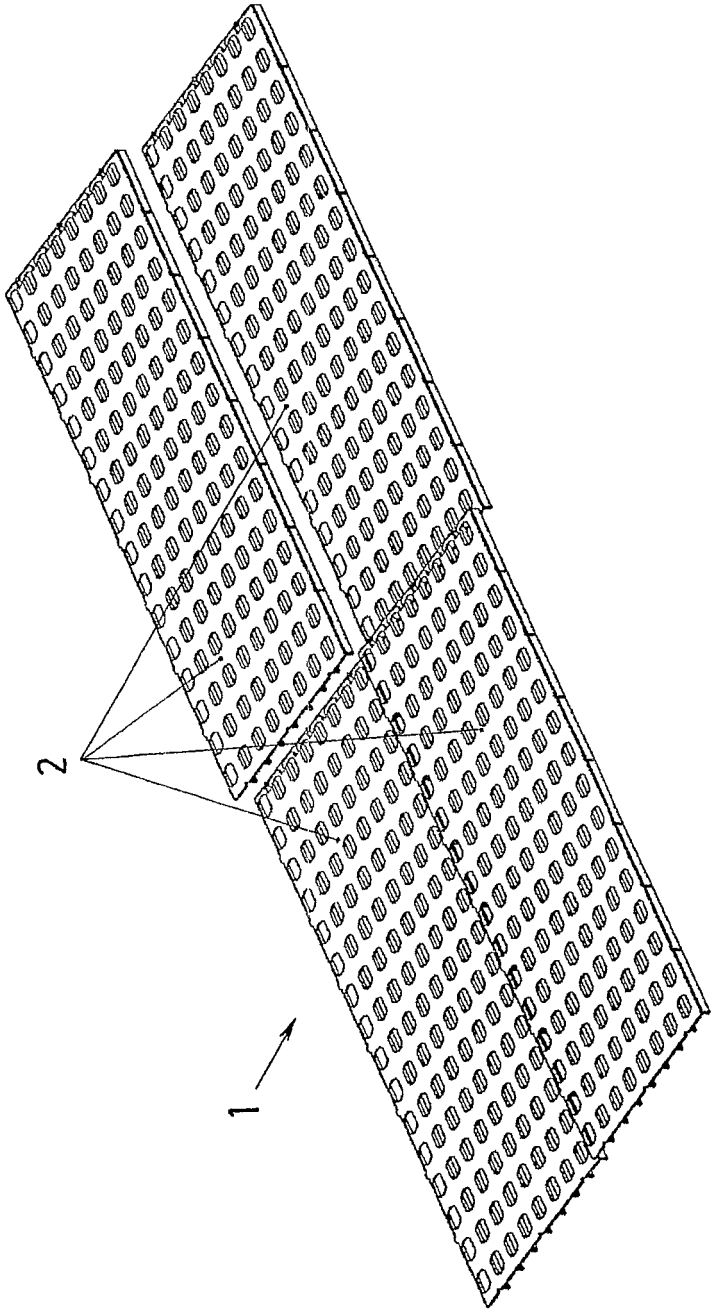

Fig.7

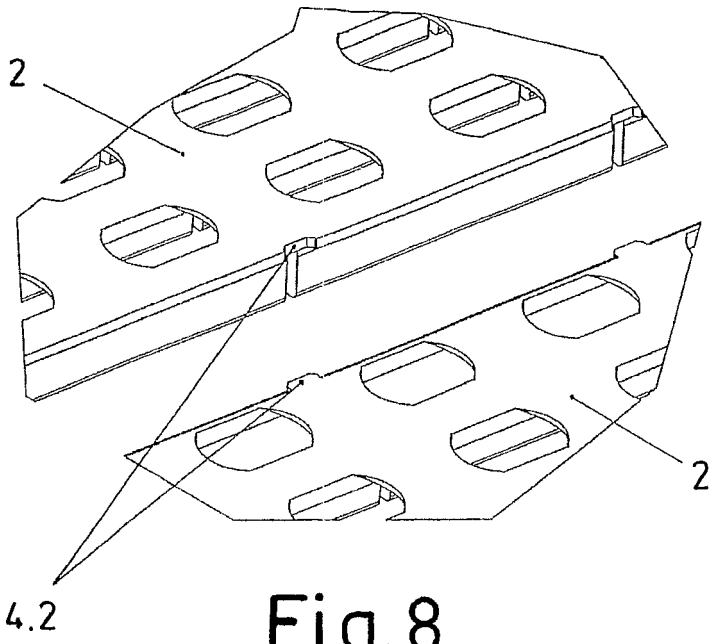

Fig.8

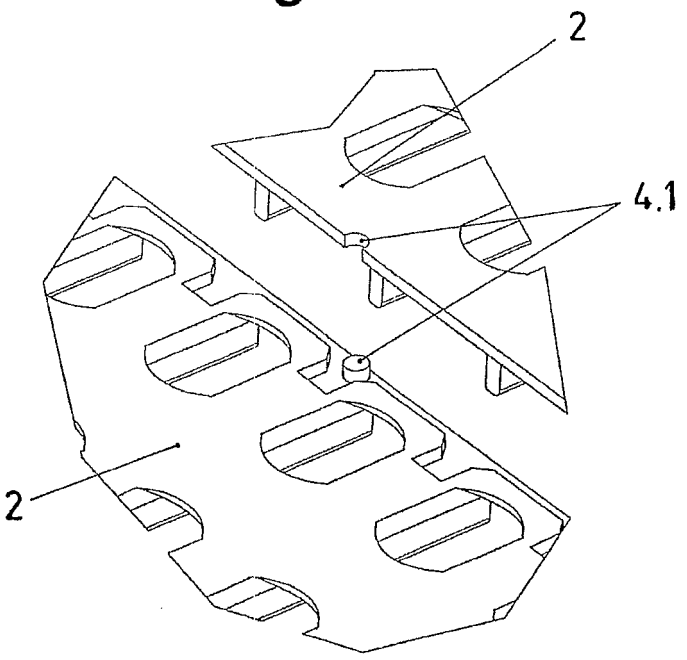

Fig.9

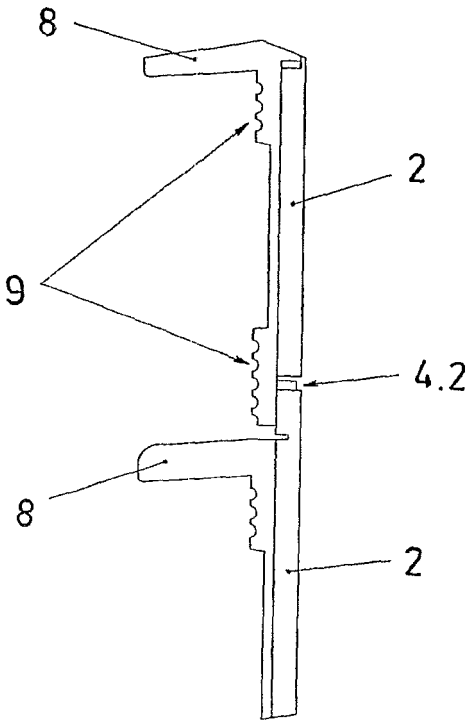

Fig.10

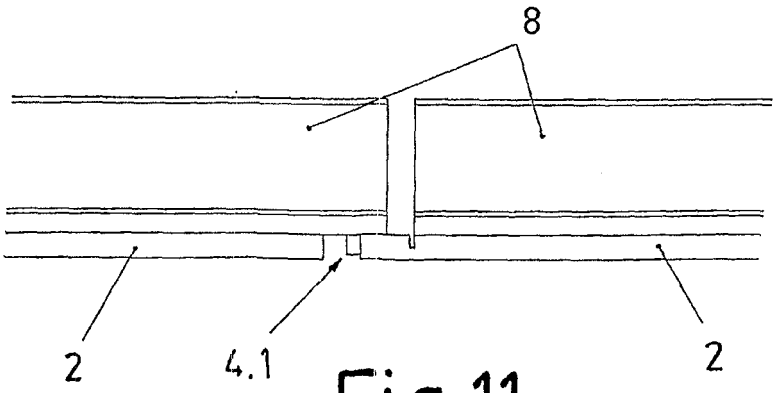

Fig.11

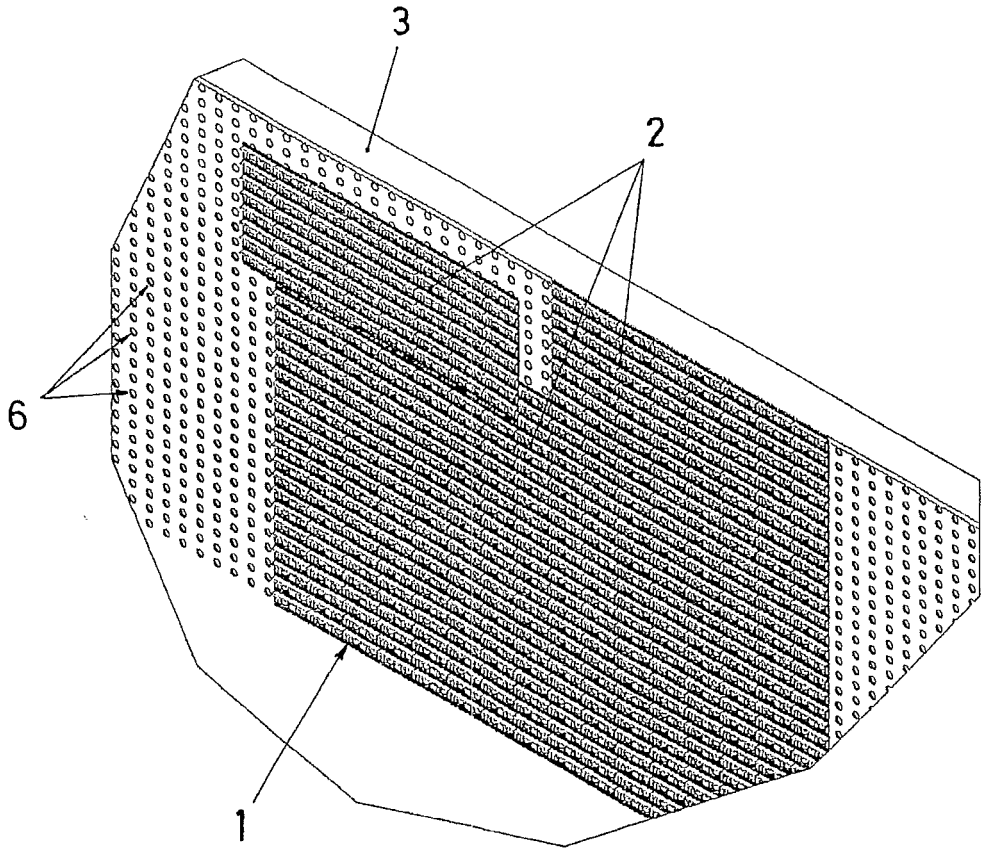

Fig.12