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(54) **Guiding structure for panel sliding**

(57) It is applicable to panels arranged in parallel vertical planes associated with a display furniture structure with an upper guide and a lower guide in which participate a rear roller guide fixed to the panels which run on a rail and a forward roller guide which rolls along the ground during the displacement of said panels. It comprises a dual-effect damping device (6) comprising a fixed body (7) where a horizontal mobile rod (8) is coupled and guided with travel restriction in its two directions by means of a small rear head (16) and a main forward head (9) with the latter also limiting the displacements of the panels (2) outwards and inwards, damping the ends of those displacements with elastic elements, in which end sections the rod (8) is also displaced.

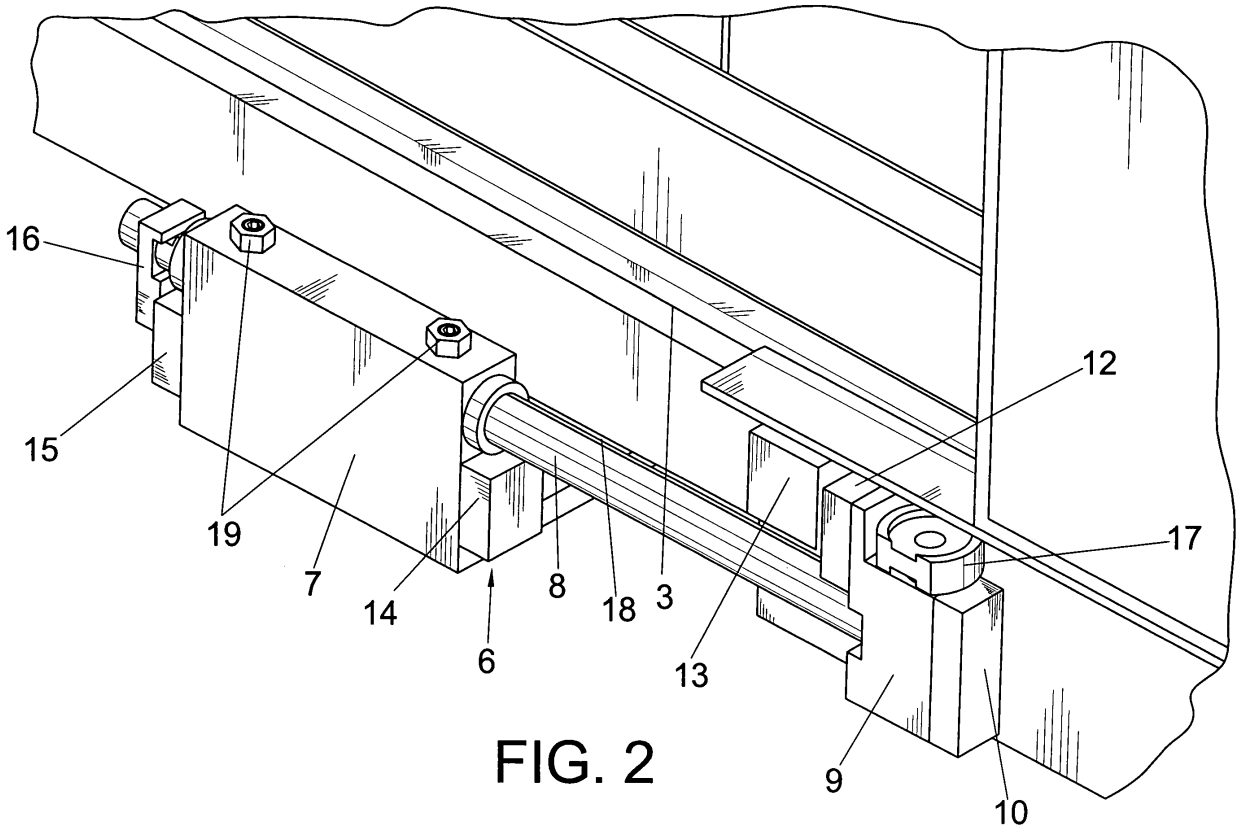

FIG. 2

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Description

OBJECT OF THE INVENTION

[0001] As stated in the title of this specification, the present invention relates to a guiding structure for the sliding of display panels or any other similar element.

[0002] The objective of the invention are certain means which improve the longitudinal sliding of the panels, achieving a smooth homogenous movement throughout its extent, particularly in its end positions, with a complete absence of the mechanical noises that are so habitual in conventional guiding structures, where the noises increase in those end positions.

PRIOR ART OF THE INVENTION

[0003] Guiding structures for panels are currently known in which rollers and guides, and even combinations of the two, are used for achieving an optimum displacement of the display panels.

[0004] In the majority of cases, the greatest possible extension is sought to be obtained in display panels and thereby leave the entire display surface visible.

[0005] Nevertheless, these solutions are complex and costly, and in other cases are not very effective.

DESCRIPTION OF THE INVENTION

[0006] With the aim of achieving the objectives and avoiding the drawbacks mentioned in the above paragraphs, the invention proposes a guiding structure for panel sliding which is characterised by incorporating a dual-effect damping device provided with a mobile horizontal rod guided in a fixed body, with one of the ends of this rod incorporating a main head which possesses a forward rubber stopper which acts as a stop for part of the respective panel when it is introduced towards the inside until reaching its most withdrawn position, and a rear rubber stopper which acts as a stop for part of the panel when it is located in its most extended position in which the entire surface of the display panel is shown.

[0007] The parts of the panel stopping against the said rubber stoppers can be elastic elements, or they can simply form an integral part of the actual frame of the panel.

[0008] The displacement of the rod in its extreme positions corresponding to the extreme positions of the panels is limited by other forward and rear rubber stoppers integral with the fixed body.

[0009] The furniture includes a support structure with some lower parallel guides where panels are provided in vertical planes, each one of which possesses a forward roller guide for support on the ground and a rear roller guide with a centred throat which runs on a rail of the guide in the base of the display furniture.

[0010] Each main head incorporates a roller guide provided in a horizontal plane which facilitates and also softens the sliding of the panels.

[0011] The structure which the damping device presents permits its application to panels with sliding in one direction or the other, with the main head being located at one or the other end of the rod. This can also be achieved by extracting the assembly of the rod with its main head and introducing it the other way round.

[0012] The panels also possess a conventional upper guide associated with the highest part of the furniture.

[0013] Below, in order to facilitate a better understanding of this specification and forming an integral part thereof, some figures are attached in which, by way of illustration only and not limiting, the object of the invention has been represented.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014]

Figure 1.- Shows a perspective view of the guiding structure for panel sliding, forming the object of the invention.

Figure 2.- Shows a detailed view of the inventive guiding structure.

Figure 3. Shows a perspective view of a display furniture with panels incorporating the inventive guiding structure.

DESCRIPTION OF THE PREFERRED FORM OF EMBODIMENT

[0015] Considering the numbering adopted in the figures, the guiding structure for panel sliding is applicable to a display furniture 1 housing panels 2 in parallel vertical planes guided from above in the conventional way and also guided from below in principle by means of some rails 3 where run some rear roller guides 4 fixed to the panels and also some forward roller guides 5 also fixed to the panels and which roll along the ground in their displacement.

[0016] Starting from this premise, the guiding structure incorporates a dual-effect damping device 6 which in principle comprises a fixed body 7 to which is coupled and led a horizontal mobile rod 8 which incorporates in its front end a main forward head 9 which possesses a forward rubber stopper 10 which acts as a stop for a piece 11 integral with the panel 2 when it is introduced towards the interior until it reaches its most withdrawn position, and a rear rubber stopper 12 which acts as a stop for another piece 13 also integral with the panel 2 in its extended position.

[0017] The sliding of the rod 8 in its extreme positions, corresponding to the extreme positions of the panels 2, is limited by other forward 14 and rear 15 rubber stoppers integral with the fixed body 7, with the main head 9 acting as a stop against the forward rubber stopper 14 when the panel 2 is withdrawn or folded, while a small head 16 integral with the rear end of the mobile rod 8 acts as a stop against the rear rubber stopper 15.

[0018] Each main head 9 incorporates a roller guide 17 in a horizontal plane which facilitates and also softens the displacement of the panels.

[0019] The rod 8 possesses a longitudinal groove 18 where certain centring devices 19 are housed which prevent the rotation of the rod ensuring that the associated elements remain vertical, as well as the rotation of said rod.

Claims

1. GUIDING STRUCTURE FOR PANEL SLIDING, which, being applicable to panels arranged in parallel vertical planes associated with a display furniture structure with an upper guide and a lower guide in which participate a rear roller guide fixed to the panels which run on a rail and a forward roller guide which rolls along the ground during the displacement of said panels, is **characterised in that** it comprises a dual-effect damping device (6) comprising a fixed body (7) where a horizontal mobile rod (8) is coupled and guided with travel restriction in its two directions by means of a small rear head (16) and a main forward head (9) with the latter also limiting the displacements of the panels (2) outwards and inwards, damping the ends of those displacements with elastic elements, in which end sections the rod (8) is also displaced.

2. GUIDING STRUCTURE FOR PANEL SLIDING, according to the previous claim, **characterised in that** the panels (2) have forward (11) and rear (13) elastic end pieces, which are respectively complemented with some rubber stoppers of the forward 10 and rear 12 main head, which act as a stop for the panels at the end of their displacements.

3. GUIDING STRUCTURE FOR PANEL SLIDING, according to either of the previous claims, **characterised in that** the fixed body (7) of the damper device (6) incorporates some forward (14) and rear (15) elastic elements acting as a stop for the main (9) and rear (16) heads, respectively, at the end of both travels of the mobile rod (8) and end displacements of the panels (2).

4. GUIDING STRUCTURE FOR PANEL SLIDING, according to any of the previous claims, **characterised in that** the main head (9) incorporates an upper horizontal roller guide (17) which softens the displacement of the panels along one of their side faces.

5. GUIDING STRUCTURE FOR PANEL SLIDING, according to any of the previous claims, **characterised in that** the mobile rod (8) presents a circular section and includes a longitudinal groove (18) complemented with some centring devices (19) secured to the fixed body (7), thereby preventing the rotation of the rod (8) and ensuring that the elements associated with said mobile rod (8) remain vertical.

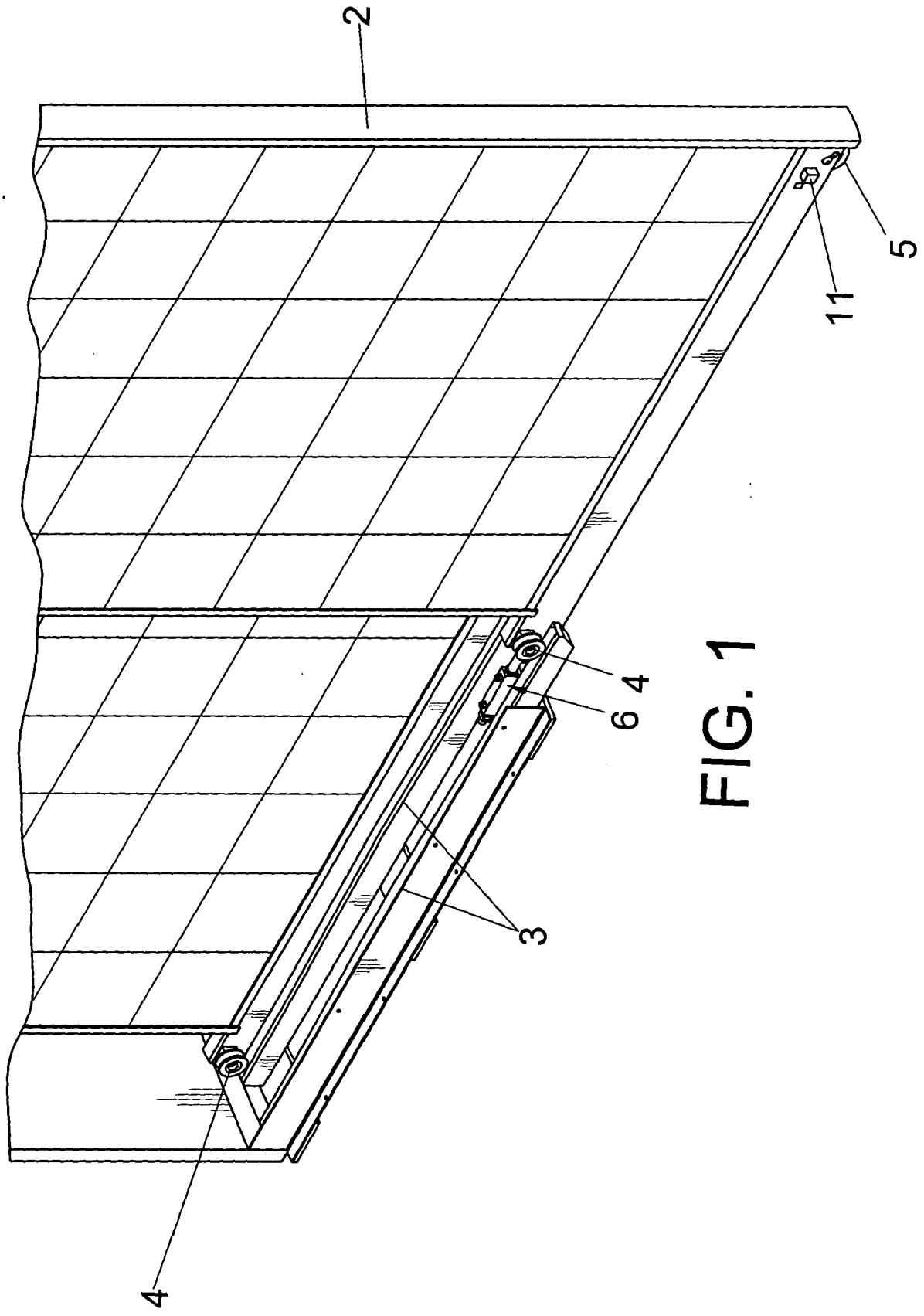

FIG. 1

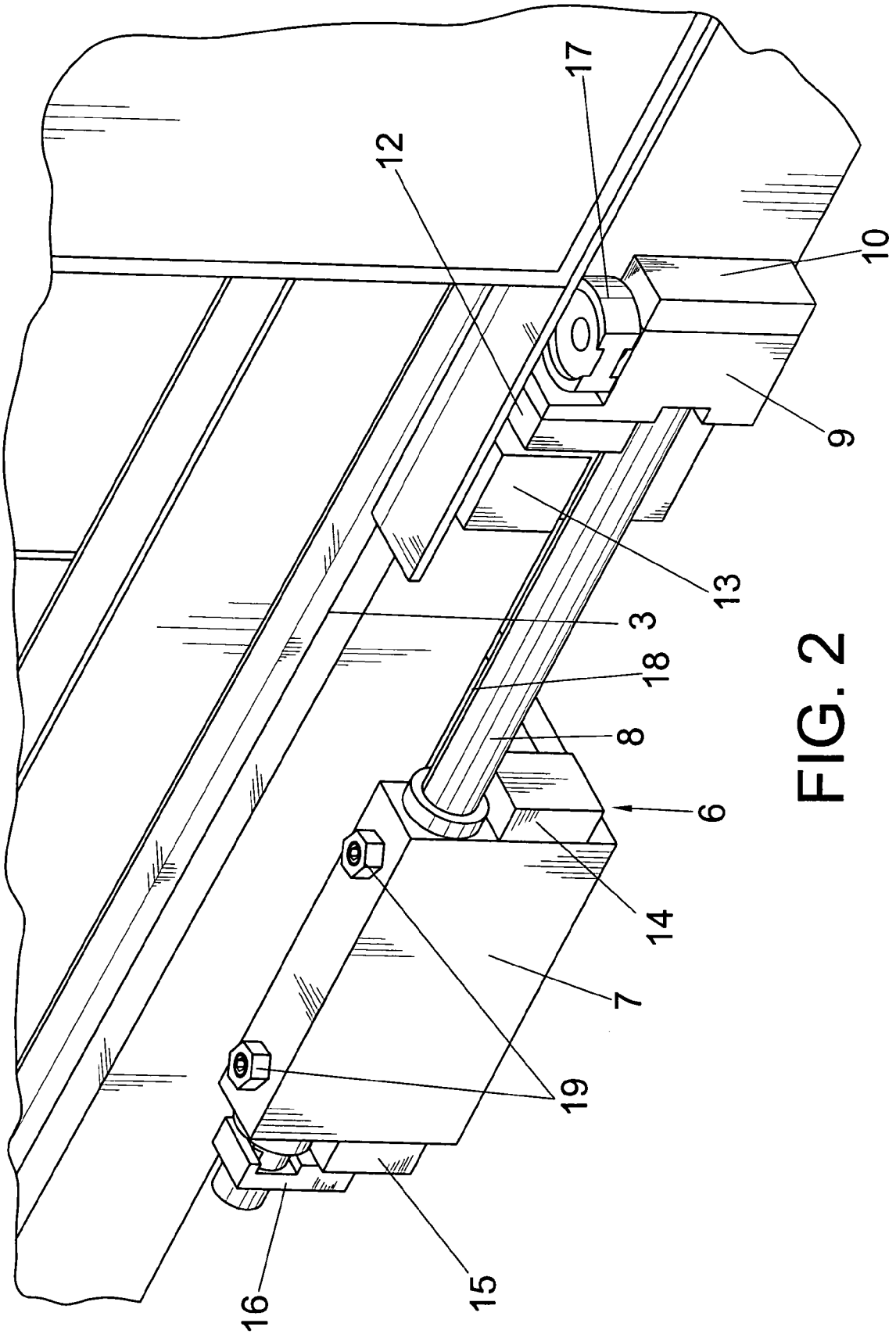

FIG. 2

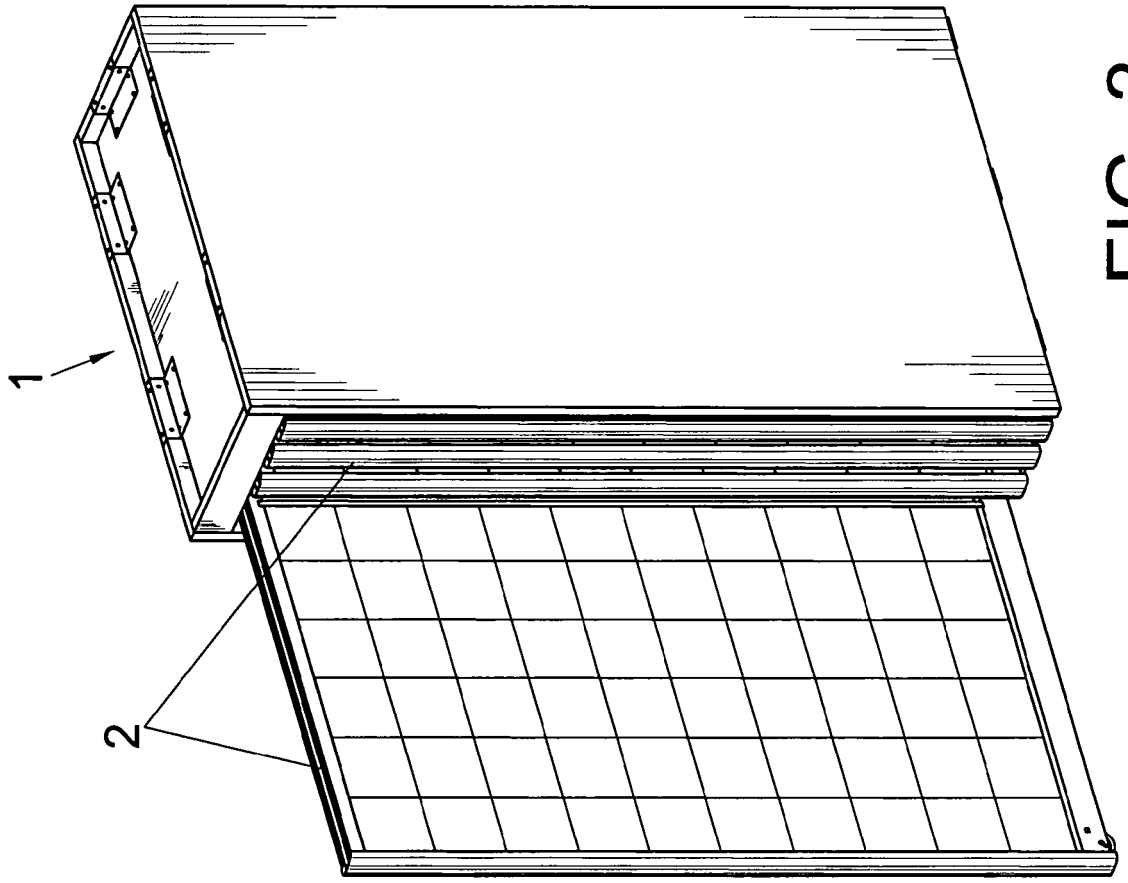

FIG. 3