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(71) Applicant: **Lumon Oy**
45130 Kouvola (FI)

(72) Inventor: **Hilliaho, Esa**
33560, Tampere (FI)

(74) Representative: **Rahkonen, Erkki Juhani**
Tampereen Patenttitoimisto Oy,
Hermiankatu 12 B
33720 Tampere (FI)

(54) A panel structure equipped with a seal, and a panel system

(57) A panel structrure equipped with a seal, comprising at least: a panel (14) which is intended for partitioning or protecting spaces and which can be coupled to a guide track (16) so that the panel can move along the guide track; and a seal (15) which is intended for sealing the gap between the panel and the guide track and which is coupled to the panel so that the seal is movable in relation to the panel and the guide track. The panel structrure also comprises: a guiding member (17), by means of which the panel can be coupled to the guide track and which is fastened to the panel so that the guiding member is movable in relation to the panel and the guide track, wherein the guiding member is also coupled to the seal so that the guiding member controls the distance between the seal and the panel, when the guiding member is moving in the guide track. The panel system comprises a guiding piece (27) which is coupled to the guide track and forces the guiding member into the guide track and guides the guiding member off the guide track when the guiding member passes through the guiding piece.

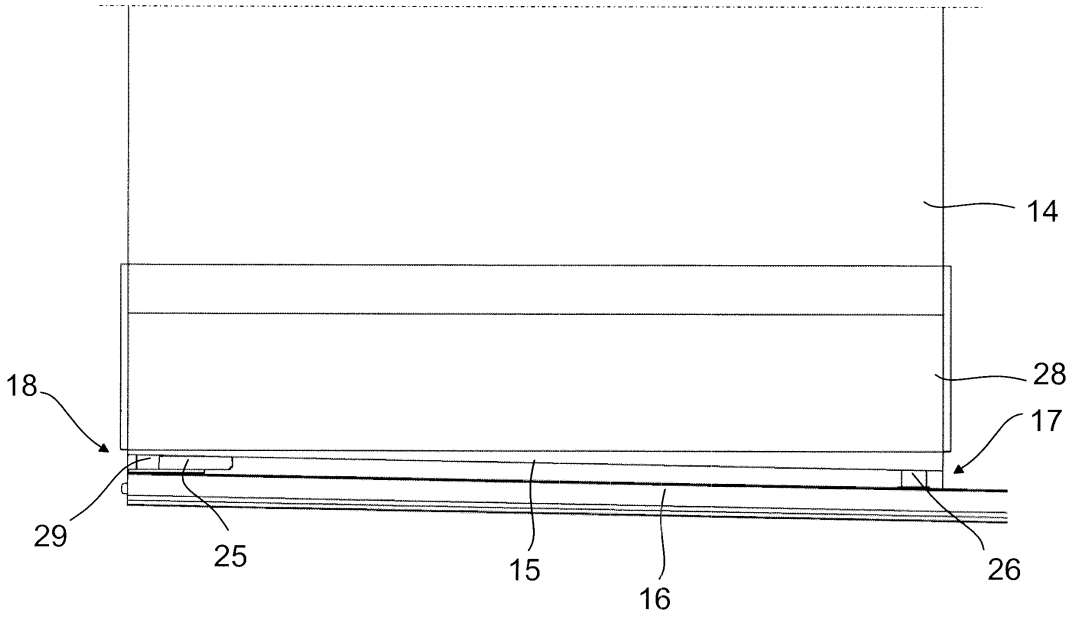

Fig. 3

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Description

[0001] The invention relates to a panel structure equipped with a seal, and a panel system.

[0002] Balcony facilities of a building are equipped with glazing systems of prior art, which are called e.g. balcony glazings. The systems typically comprise an upper profile and a lower profile, or another corresponding guide track, inside which the necessary guide track parts are placed, between which, in turn, the single glass panes are suspended. The glass panes are used as panels which limit the space or protect it, for example, from weather conditions, for example on balconies or terraces, or divide the space into several parts and partition spaces, like in rooms or business facilities, in which the panels form doors and walls. Typically, the profiles extend in the horizontal direction and are fastened to the structures of the building. By means of guide track parts, single panels can be opened and closed, normally around a vertical axis of rotation, and profiles can be moved. The panels can be moved aside when they are not needed or when a larger space or passage is to be taken into use. Some known balcony glazings are presented in the publications FI-84645-B and FI-90796-B. One system for glazing a space is presented in the publication WO 97/11247. The panels can also extend down to the floor, as in the publications GB-1456283-B, FR-2545143-A and EP-0 457 286-A1.

[0003] When a guide track is placed on a floor, a disadvantage is often the formation of a structure that is elevated higher than the surface of the floor. Therefore, it is convenient to place the guide track in a groove in the floor, but in that case it is not possible to use, for example, guide rolls according the publication FI-90796 B which extend to the inside the guide track, because the side of the guide track cannot be provided with an opening from which the roller guides fixed to the panel would come out when the panel is opened. The lower end of the panel, normally both edges of the same, must normally be provided with some kind of guiding members or guide track parts to prevent the bouncing of the lower end of the panel during the use or transfers. It is possible to install in the panel manually transferrable locking guide pins which are movable in the vertical direction. One mechanical solution is disclosed in EP 1 482 117 A2, in which locking and unlocking are achieved by moving the panel. The guide mechanism releases the lower end of the panel, wherein the panel can be opened and turned around a hinge mechanism in the panel. At the upper end of the panel, it is possible to use guide track parts of prior art and openings made in the upper profile which make it possible to open the panel.

[0004] It is often necessary to seal the gap between the lower end of the panel and the floor or the guide track, for example because of draught, of which examples are given in EP 0 595 000 A2 and DE 9209496 U1. Other examples of movable seals are disclosed in documents JP 10306664 A and JP 2005054397 A, in which the seal tends to be pressed continuously downwards, and documents JP 1022016 A, JP 9060444 A, JP 10220123 A, and JP 11182154 A, in which the seal is forced out and downwards, and documents DE 19829783 A1 and DE 29508535 U1, in which the seal is pressed freely and flexibly against the floor. In many cases, a control mechanism separate from the panel and/or the guide track is used for moving the seal in the desired position. The movable seals also take into account irregularities in the floor when the height of the gap between the panel and the floor varies, or the guide is not horizontal.

[0005] DE 19829783 A1 discloses a long guiding member which moves in a groove, is continuously pushed downwards by a spring, and simultaneously guides the moving panel, preventing, among other things, its bouncing. The guiding member can be guided off the groove, in which case the panel can be moved and turned more freely, but the guiding member is continuously pushed against the floor. A disadvantage is that the guide may be stuck in grooves and irregularities in the floor, which limits the use and damages and wears the structures. Furthermore, the alignment of the guide into the groove is difficult and requires a long transfer movement of the panel. The structure could be equipped with a manual locking for lifting up the seal and locking it in its place, but a locking mechanism requires space, is complex and requires active measures by the user. According to JP 10220126 A, JP 10306664 A and JP 11182154 A, it would be possible to include separate guiding members to force the seal in the desired position. The problem would be that a number of separate guiding members would have to be placed on the floor, separately for each panel, wherein unnecessary steps are formed above the floor surface, or their placement in the storage location of the panels (cf. WO 97/11247 and EP 0 457 286 A1) would be impossible for aesthetic reasons or in view of space utilization. The principle disclosed in JP 9060444 A, in turn, requires the precise placement and laborious fastening of a number of guide pins. Moreover, a workable system should also be compatible with the locking and hinge mechanisms according to, for example, WO 03/042482 A1.

[0006] It is an aim of the invention to develop a usable panel and a seal which is simple to use and to install. The principle of operation of the seal is also suitable for panels that are both transferred and turned open. The operation of the seal is not affected by irregularities in the floor. The invention applies guiding members which are separate from the panel, but the number of the guiding members can be minimized. The invention can be used even by means of a single guiding member, even if there were several separate panels. In one example, the panel is supported to the upper profile by means of two guide track parts and to the lower profile by means of at least one guiding member, when a second guiding member is released. Supported in this way, the panel can be transferred to a storage location and opened. The advantage is that the placement of a separate guiding

member is easy. In one example, the guiding member is integrated in the guide track, wherein a compact structure is obtained and several functions can be integrated in the guiding member: the control of the position of the seal, the guiding of the panel along the guide track, the hinging, and the locking of the panels. In addition, the seal compensates for skewness of the floor or the guide track. The seal and its operation exploit the guide track that is utilized by the panel when it is moving.

[0007] The panel structure according to the invention, equipped with a seal, will be presented in claim 1. The panel system according to the invention will be presented in claim 18.

[0008] The invention can be applied in panels equipped with seals, and in panel systems that also allow the opening of the panels.

[0009] In the following, the invention will be illustrated in more detail by means of a preferred embodiment, wherein reference will also be made to the appended drawings, in which

Fig. 1 shows a panel system of prior art in a cross section,

Fig. 2 shows two guide tracks according to prior art in a perspective view,

Fig. 3 shows the operation of guiding members and a seal according to one example of the invention in a side view,

Fig. 4 shows a fillet and a guide track according to the example of Fig. 3,

Fig. 5 shows a guiding member according to the example of Fig. 3,

Fig. 6 shows the structure of the guiding member according to the example of Fig. 3,

Fig. 7 shows the operation and the locking of the guiding member according to the example of Fig. 3,

Fig. 8 shows the operation and the unlocking of the guiding member according to the example of Fig. 3,

Fig.9 shows the structure of the guiding piece according to the example of Fig. 8.

[0010] Figure 1 shows a panel structure of prior art which is installed in position and which is simultaneously a glazing system for e.g. balconies. The panel system normally comprises several successive glass panes 1 which are movable. The panels 1 are normally rectangular, wherein they are normally in an upright position and form a closed wall or a large window when placed one after the other. They can be transferred in the direction of the guide tracks, which is typically the horizontal direction. The panels 1 can be opened into a position which is normally perpendicular to the closed position shown in Fig. 1. In the open position, the panels 1 are placed side by side close to each other, wherein they are stored at one side of the opening 3 in the building 2, where they have first been moved along the guide tracks. The upper guide track 4 and the lower guide track 5 are placed in the horizontal direction, and inside them, upper guide track parts 6 and lower guide track parts 7 are positioned, which are simultaneously used as guiding members and between which the panels 1 are fastened from above and from below. The guide tracks are normally profiles made of aluminium and provided with a long groove for the guide track parts. The panel 1 preferably consists of a glass pane, whose lower and upper edges are provided with fillets 8 and 9, to which the guide track parts, in turn, are fastened.

[0011] One example of known upper guide track parts 6 is shown in Fig. 2. The panel 1 is normally provided with a fillet 9, to which a hinge pin 10 is fastened. The hinge pin is shaped and unrotatable with respect to the panel 1. The hinge pin 10 of the guide track parts 6 makes it possible to pivot the panel 1 around a vertical axis of rotation, from the closed position (position A) to the open position (position B), and *vice versa.* The rotating takes place around the hinge pint 10. The guide track parts 6 are placed on the support of the upper guide track 4 and are supported to it by means of, for example, vertical rolls 11. Alternatively, the rolls 11 can be connected horizontally at the end 12 of the hinge pin 10. The rolls 11 support the panel 1, and by means of the rolls 11, the panel 1 is moved along the upper guide track 4. A locking piece 13 sliding in the guide track guides the movement and locks the panels 1 to each other, if necessary. The locking pieces remain in alignment with the guide track, and the panel 1 can turn in relation to them. In this example, the locking piece is locked to the hinge pin of the next guide track parts.

[0012] In Fig. 1, the structure of the guide track parts 7 placed in the lower guide track 5 corresponds substantially to the guide track parts 6, at least for the part of the hinge pin 10, but for example the rolls 9 are not necessary. The guide track parts 6 and 7 are placed on the same vertical axis of rotation, wherein the opening of the panel is possible, and normally, they are placed at one edge of the panel 1, as shown in Fig. 2. For example a guiding member, which may be a pin and/or a guide roller, is, in turn, placed on the other, opposite edge of the panel 1, or close to it, and fastened to the fillet, placed inside the guide track, and keeps the panel closed. The purpose of the guiding member is to guide the other edge of the panel 1 during transfers, wherein the guiding member keeps the panel 1 in alignment with the upper and lower guide tracks, which are normally parallel as well. The guiding member is fastened to both the lower edge and the upper edge of the panel 1.

[0013] According to known solutions, and for opening

the panel, the side of the guide track is provided with an opening, through which the guiding member can come off the guide track. In a situation in which the lower guide track 5 is placed entirely inside, for example, a floor, or the guide track parts 7 otherwise extend lower than the floor surface, a liftable pin is used so that the panel 1 can be turned.

[0014] Figure 3 shows an example in which the panel extends down to the floor. The lower edge of the panel 14 is provided with a fillet 28, which is, for example, an aluminium profile, whose inside comprises a space into which a movable seal 15 can withdraw and from which the seal 15 protrudes but still remains connected to the fillet 28 which guides the movement of the seal 15. The seal 15 is, for example, a profile extending substantially over the whole width of the panel 1. The seal 15 may consist of metal, for example aluminium, and/or plastic, wherein the seal 15 is flexible, if necessary. In the example of Fig. 3, the seal 15 consists of one part which can be placed in an inclined position in relation to the fillet 28, wherein irregularities of the floor and inclination of the guide track 16 can be compensated for. The sealing 15 may also comprise several separate parts, and typically two guiding members are needed for each part. In the example shown in Fig. 4, the seal 15 is a U-shaped profile, a curved tongue 15a extending downwards from one of its lower edges. When desired, the tongue 15a is placed against the upper surface of the guide track 16. The guide track 16 is used as a guiding rail. The guide track 16 can be embedded in the floor, if desired. The movability of the seal 15 makes it possible that the guide track 16 does not need to be horizontal. The panel 14 is supported by a guide track which is placed above the panel 1 and which is installed in the horizontal direction. The panel 14 is supported to the guide track 16 only in the lateral direction, because the guide track above the panel 14 supports the panel 14 and receives all the vertical forces caused by the weight of the panel 14.

[0015] Figure 5 shows one example of the implementation of the guiding member 17 and its placement inside the fillet 28. Figure 5 shows a frame part 19 which is fixed inside the fillet 28 and which is used for connecting the guiding member 17 and the shaft 26 of the guiding member 17 to the fillet 28. The frame part 19 is also placed partly inside the shape of the seal 15. The guiding member 18 of Fig. 3 corresponds closely to the implementation of the guiding member 17, and for the shaft 29 of the guiding member 18, a corresponding frame part is provided and placed inside the fillet 28. The frame parts are placed at opposite ends of the fillet 28 and the seal 15, and by means of them, the seal 15 and the required mechanism can be easily placed in the panel 14.

[0016] Figure 4 shows an example of the fillet 28 in more detail. The fillet 28 may consist of one or more parts, preferably of an aluminium profile. The seal 15 is placed partly inside the fillet 28. The seal 15 is coupled to the fillet 28 by one or more means 20 shown in Fig. 5 which pull the seal 15 into the fillet 28, that is, upwards. The means 20 is, for example, a coil spring. On the other hand, the seal 15 is also connected to the guiding members 17 and 18, preferably to their vertical shafts 26 and 29 which extend from the fillet 28 towards the guide track 16 and into the guide track 16, when the shafts 26 and 29 are pulled partly out of the fillet 28. The shafts 17 and 18 move up and down in the direction of their longitudinal axes. The frame part 19 is provided with a hole 21 in which the shaft 26 can move. The guiding member 17 and the shaft 26 are shown in more detail in Fig. 6. The shaft 62 is coupled to the frame part 19 with a member 22 that pulls the shaft 26 into the fillet 28, that is, upwards. The member 22 is, for example, a coil spring that is placed around the shaft 26 and that is supported, on one hand, to the frame part 19 and, on the other hand, to the shaft 26. The guiding member 18 and the shaft 29 are provided with a similar coupling to their respective frame part.

[0017] The seal 15 is also coupled to the shafts 26 and 29 so that, for example, the position and height level of the shaft 26 in relation to the guide track 16 also determines the position and height level of the seal 15. The shaft 26 pulled down will also pull the seal 15 with it. The seal 15 is provided with for example an opening, through which the shaft 26 extends. The shaft 26 is provided with a stopper 23, for example a collar that cannot extend through the opening but pushes the seal 15 downwards, so that the seal 15 is carried along by the shaft 26. The member 20 that lifts up the seal 15 keeps the seal 15 uplifted and tensioned against the stopper 23. The stopper 23 allows the seal to go down. According to another example, the seal 15 is coupled to the shaft 26 so that the seal 15 follows the movement of the shaft 25 also without the member 20. The seal 15 is thus fixed, for example, between two stoppers. Thus, the members 20 and 22 tend to pull the guiding member 17 and the seal 15 away from the guide track 16 and simultaneously from the floor. The guiding member and the seal tend to be pulled away from the guide track automatically and spontaneously, and continuously by the members 20 and/or 22.

[0018] A guiding element 24 is fixed to the end of the shaft and placed inside the guide track 16. A shown in Fig. 4, the cross-section of the guide track 16 has, for example, a C-shape, the shaft 26 fitting via the opening 16a of the C-shape and extending into the guide track 16. The guiding element 24 remains locked inside the guide track 16, even though the shaft 26 is continuously pulled into the fillet 28 by, for example, the force of a spring. The guiding element 24 is, for example, a horizontal roll, whose diameter is greater than the width of the opening 16a. A long opening 16a on the upper surface of the guide track 16 allows the movement of the guiding member 17 and the shaft 26 along the guide track 16 when the element 24 is inside the guide track 16. When the element 24 moves inside the guide track 16, the element 24 simultaneously secures that the seal 15 is at a desired distance from the guide track 16 and pulled out of the panel 14. The guiding member 17, the shaft 26

and the seal 15 move towards or away from the panel 14 and the guide track 16. In the presented example, the operation and structure of the guide track 18 correspond substantially to those of the guiding member 17. The guiding member can also be provided with another shape and with a part that remains locked inside the guide track. For example, an L-shape fixed to the shaft is feasible. Also another part which slides inside the guide track and for which a corresponding opening 16b is provided, is feasible.

[0019] The functioning of the seal 15 is controlled by the guiding member 17 and the element 24, wherein the seal 15 is in the functional position when the element 24 is inside the guide track 16 and the guide track 16 keeps the guiding member 17 pulled down together with the shaft 26 and the seal 15, as shown in Fig. 7. The seal 15 is turned off and pulled in the upper position when the guiding member 17 has been released from inside the guide track 16 and pulled up together with the shaft 26, wherein the coupling between the shaft 26 and the seal 15 also allows the pulling up of the seal 15, as shown in Fig. 8. The guide track 16 is provided with a shorter and wider opening 16b, shown in Fig. 4, through which the guiding member 17 and the element 24 can leave or enter the guide track 16. The distance between the seal 15 and the guide track 16 can be set by means of the coupling between the seal 15 and the shaft 26. Furthermore, a sufficiently long clearance is arranged for the shaft 26 inside the fillet 28, so that even a considerable inclination of the guide track 16 can be compensated for.

[0020] The guiding member 18 and the shaft 29 are controlled in a corresponding manner. When the guiding member 17 is pulled out of the guide track 16 in Fig. 3, the panel 14 can be turned aside, wherein the guiding member 18 and its shaft 29 can act as a hinge, if the guiding member 18 is inside the guide track 16. The panel 14 can be moved along the guide track 16, for example, to the storage position or to another desired position. If the guide track 16 comprises the opening 16b, the guiding member 17 rises up from the guide track 16, and the panel 14 can also be turned to a desired position. The guiding member 18 acting as a hinge can be arranged to be different, for example, in size or shape, than the element 24 of the guiding member 17 so that the guiding member 18 cannot come off the opening 16b or else it remains always inside the guide track 16. For example, flanges can be placed inside the guide track 16, which flanges support the shaft 29 or the guide roller of the guiding member 18 but do not have an opening corresponding to the opening 16b. This arrangement can be introduced particularly in panels that can be opened, but both of the guiding members 17 and 18 can rise up in such panels which cannot be opened and which always suspend from two guide track parts. In such panels, also the locking members, which will be presented later on, are not necessary.

[0021] The operation shown in Figs. 7 and 8 is controlled by means of a guiding piece 27 that guides the approaching guiding member 17 either into the guide track 16 or out of the guide track 16. Thanks to the guiding piece 27, it will not be necessary to transfer the guiding member 17 into the guide track 16 manually or by means of a mechanism. The guiding piece 27 is placed on top of the guide track 16 and at the opening 16b so that the guiding member 17 hits the guiding piece 27, in which inclined and guiding surfaces are designed to pull the guiding member 17 into the guide track 16 when the panel 14 moves from the left to the right in Fig. 7. In a corresponding manner, the guiding surfaces allow the guiding member 17 to rise, or even force the guiding member 17 up off the guide track when the panel 14 moves from the right to the left in Fig. 8. The shape and the structure of the guiding surfaces vary according to the shape of the guiding member 17 or the parts of the guiding member 17 that are locked into the guide track 16 or move inside the guide track 16. If necessary, the guiding piece 17 comprises an opening corresponding to the opening 16a in which the guiding member 18 that remains continuously in the guide track 16 can pass the guiding piece 27.

[0022] The guiding piece 27 and its placement in the opening 16b are shown in more detail in Fig. 9. The guiding piece comprises two parts which are mirror images of each other and which are placed on both sides of the opening 16a.

[0023] As shown in Fig. 3, a locking member 25 is coupled to the guiding member 18 and the shaft 29, corresponding substantially to the locking piece 13 of Fig. 2 and its operation. The locking member 25 extends from the shaft 29 towards the opposite shaft 24. The shaft 29 corresponds to the unrotatable, shaped hinge pin 10 of Fig. 2 that is turned with the panel and to which the locking member of the next panel is interlocked when the panels are turned e.g. 90 degrees in relation to the guide track 16. The shapes of the shaft and the locking member are locked to each other when the shaft 29 rotates with the panel 28. The locking member 25 is placed between the seal 15 and the guide track 16 and partly also in the opening 16a that guides the position of the locking member 25 and keeps it directed towards the approaching hinge pin, shaft or corresponding guiding member of the adjacent panel. By means of the locking member 25, several panels are interlocked in a safe and unbouncing manner when the panels are in the storage location. The guiding member 18 of each panel is interlocked to the corresponding guiding member 18 of the adjacent panel; in other words, the shaft 29 of the guiding member 18 is locked to the locking member of the adjacent panel, and the locking member 25 of the guiding member 18 is locked to the shaft of the guiding member of another adjacent panel.

[0024] The invention is not restricted solely to the embodiments presented above. The shapes of the guide track, the fillets, the profiles, and the seal may vary to a desired extent.

Claims

1. A panel structure equipped with a seal, comprising at least:

   - a panel (14) which is intended for partitioning or protecting spaces and which can be coupled to a guide track (16) so that the panel can move along the guide track, and
   - a seal (15) which is intended for sealing the gap between the panel and the guide track and which is coupled to the panel so that the seal is movable in relation to the panel and the guide track,

   characterized in that the panel structure also comprises:

   - a guiding member (17), by means of which the panel can be coupled to the guide track and which is fastened to the panel so that the guiding member is movable in relation to the panel and the guide track, wherein the guiding member is also coupled to the seal so that the guiding member controls the distance between the seal and the panel, when the guiding member is moving in the guide track.

2. The panel structure according to claim 1, **characterized in that** the guiding member (17) is arranged to remain locked to the guide track so that when the panel is moving, the guiding member (17) cannot withdraw away from the guide track, irrespective of the distance between the panel and the guide track, and further, the guiding member (17) is arranged to keep the seal at a desired distance from the guide track, for example when the distance between the seal and the panel is changed.

3. The panel structure according to claim 1 or 2, **characterized in that** the guiding member (17) is further fastened to the panel in such a way that the guiding member tends to spontaneously withdraw away from the guide track, wherein the panel structure further comprises first members (22) coupled to the guiding member (17) and continuously pulling the guiding member (17) away from the guide track.

4. The panel structure according to claim 3, **characterized in that** the panel structure also comprises second members (20) coupled to the seal and pulling the seal continuously away from the guide track.

5. The panel structure according to any of the claims 1 to 4, **characterized in that** the guiding member (17) is provided with third members (23), by means of which the guiding member (17) is coupled to the seal and which are moved along with the guiding member (17), and which allow the movement of the seal in relation to the guiding member (17) as well as limit the movement of the seal away from the guide track.

6. The panel structure according to claim 6, **characterized in that** the third members allow the movement of the seal towards the guide track.

7. The panel structure according to any of the claims 1 to 6, **characterized in that** the guiding member (17) is provided with a guiding element (24) which can be placed inside the guide track and which prevents the guiding member (17) from withdrawing away from the guide track.

8. The panel structure according to any of the claims 1 to 7, **characterized in that** the guiding member (17) is formed as a shaft (26) coupled to the panel in a movable manner, and the panel structure comprises a spring (22), by means of which the shaft is coupled to the panel and which pulls the shaft continuously towards the panel.

9. The panel structure according to claim 8, **characterized in that** the guiding member (17) is provided with a roller which is coupled to the end of the shaft and is intended to be placed and locked inside the guide track.

10. The panel structure according to any of the claims 1 to 9, **characterized in that** the panel structure also comprises a second guiding member (18) which is coupled to the panel in such a way that the second guiding member (18) is movable in relation to the panel and the guide track, and tends to withdraw spontaneously away from the guide track, wherein said seal and said second guiding member (18) are also coupled to each other in such a way that the position of the second guiding member (18) in relation to the panel controls the position of the seal in relation to the panel.

11. The panel structure according to claim 10, **characterized in that** the second guiding member (18) is arranged to remain locked to the guide track so that when the panel is moving, the second guiding member (18) cannot withdraw away from the guide track.

12. The panel structure according to claim 10 or 11, **characterized in that** a locking member (25) is coupled to the second guiding member (18), which locking member is movable with the second guiding member (18) and is arranged to be coupled to a corresponding third guiding member coupled to a corresponding second panel, and to be locked to the third guiding member when said second panel is turned next to the panel (14).

13. The panel structure according to claim 12, **characterized in that** the second guiding member (18) is designed as an unrotatable shaft (29) which is coupled to the panel in a movable manner, and the panel structure comprises a spring, by means of which the shaft (29) is coupled to the panel and which pulls the shaft (29) continuously towards the panel, wherein the shaft (29) is arranged to be coupled and locked to a corresponding second locking member coupled to a corresponding third panel, when said third panel is turned next to the panel (14).

14. The panel structure according to claim 12, **characterized in that** the locking member (25) is coupled to the guide track so that the position of the locking member does not change in relation to the guide track when the panel is turned around the second guiding member (18) in relation to the guide track and when the guiding member (17) is released from the guide track and the second guiding member (18) is locked to the guide track.

15. The panel structure according to any of the claims 1 to 14, **characterized in that** the panel comprises a fillet (28) to which said seal is coupled and inside which a frame structure (19) is placed, to which said guiding member (17) is coupled.

16. The panel structure according to any of the claims 1 to 15, **characterized in that** the panel structure can also be coupled to a second guide track so that the panel is placed between said guide track (16) and the second guide track and is movable along both said guide track (16) and said second guide track.

17. The panel structure according to any of the claims 1 to 16, **characterized in that** the panel structure further comprises guide track parts, by means of which the panel can be coupled to a second guide track in a movable manner.

18. A panel system that comprises at least:

- a panel (14) intended for the partitioning or protection of spaces,
- a guide track (16), to which the panel is coupled and along which the panel can be moved, and
- a seal (15) which is intended for sealing the gap between the panel and the guide track and which is coupled to the panel so that the seal is movable in relation to the panel and the guide track,

characterized in that the panel system also comprises:

- a guiding member (17), by means of which the panel is coupled to the guide track and which is fastened to the panel so that the guiding member is movable in relation to the panel and the guide track, wherein the guiding member is also coupled to the seal so that the guiding member controls the distance between the seal and the panel, when the guiding member is moving along the guide track, and
- a guiding piece (27) which is coupled to the guide track and forces the guiding member into the guide track and guides the guiding member off the guide track when the guiding member passes through the guiding piece.

19. The panel system according to claim 18, **characterized in that** the guiding member (17) is also fastened to the panel in such a way that the guiding member tends to withdraw spontaneously away from the guide track, and further the guiding member (17) is arranged to keep the seal at a desired distance from the guide track when the guiding member is moving in the guide track, for example when the distance between the seal and the panel changes.

20. The panel system according to any of the claims 18 to 19, **characterized in that** the panel structure also comprises a second guiding member (18) which is coupled to the panel in such a way that the second guiding member (18) is movable in relation to the panel and the guide track and tends to withdraw spontaneously away from the guide track, wherein said seal and said second guiding member (18) are also coupled to each other in such a way that the position of the second guiding member (18) in relation to the panel controls the position of the seal in relation to the panel.

21. The panel system according to claim 20, **characterized in that** the panel can be turned around the second guiding member (18) in relation to the guide track, when the guiding member (17) is released from the guide track and the second guiding member (18) is locked to the guide track.

22. The panel system according to any of the claims 18 to 21, **characterized in that** it further comprises a second guide track so that the guide track (16) and the second guide track are parallel, the panel is coupled between said guide track (16) and the second guide track, and the panel can be moved along both said guide track (16) and said second guide track.

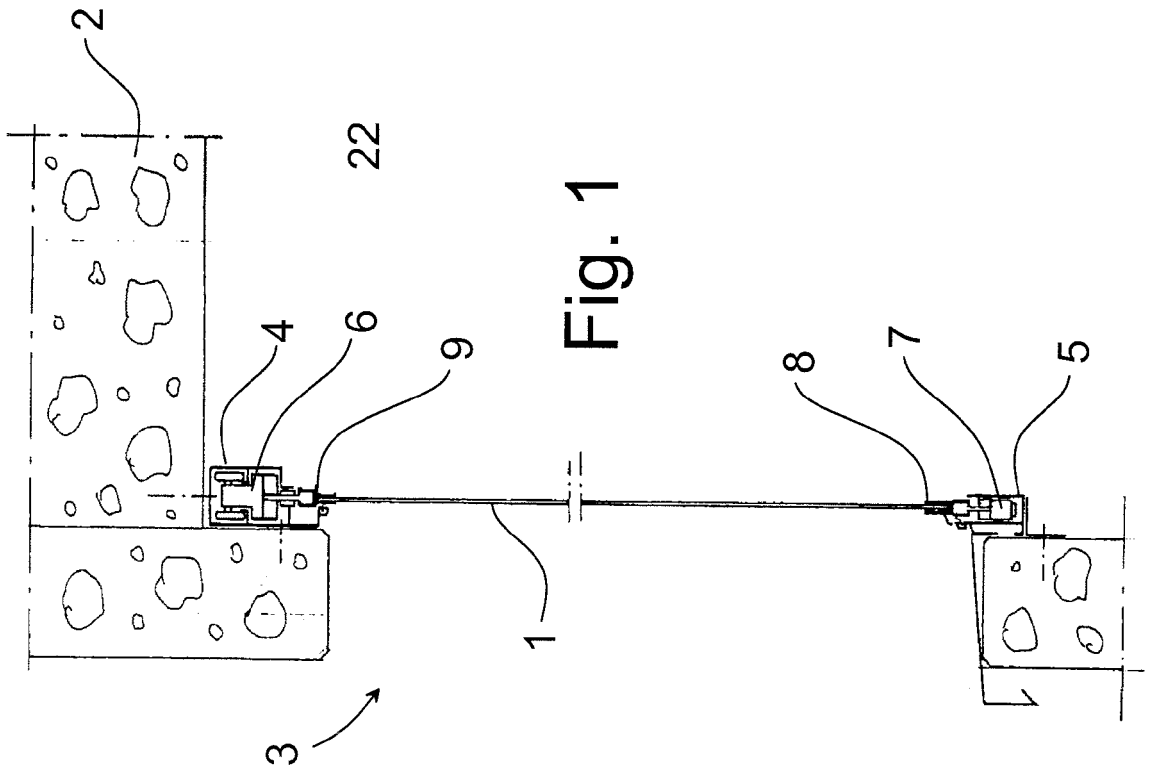

Fig. 1

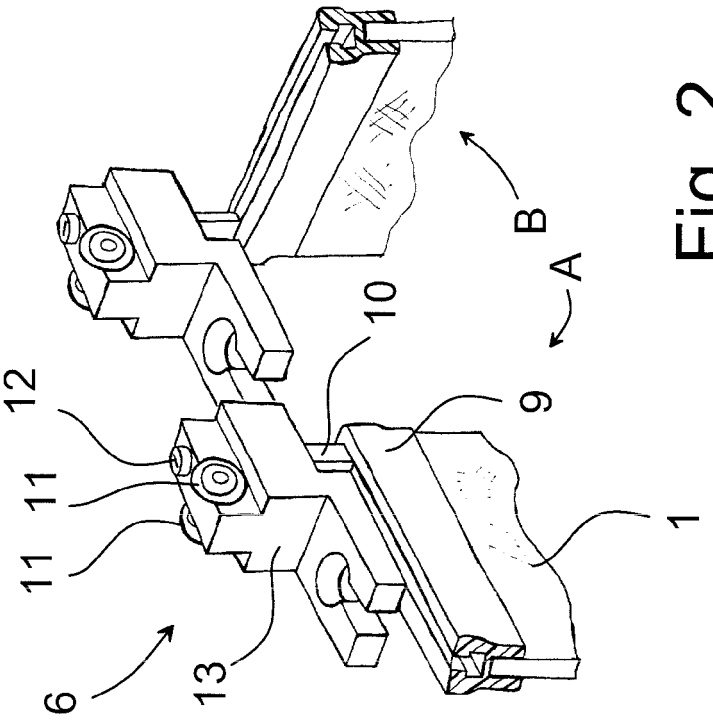

Fig. 2

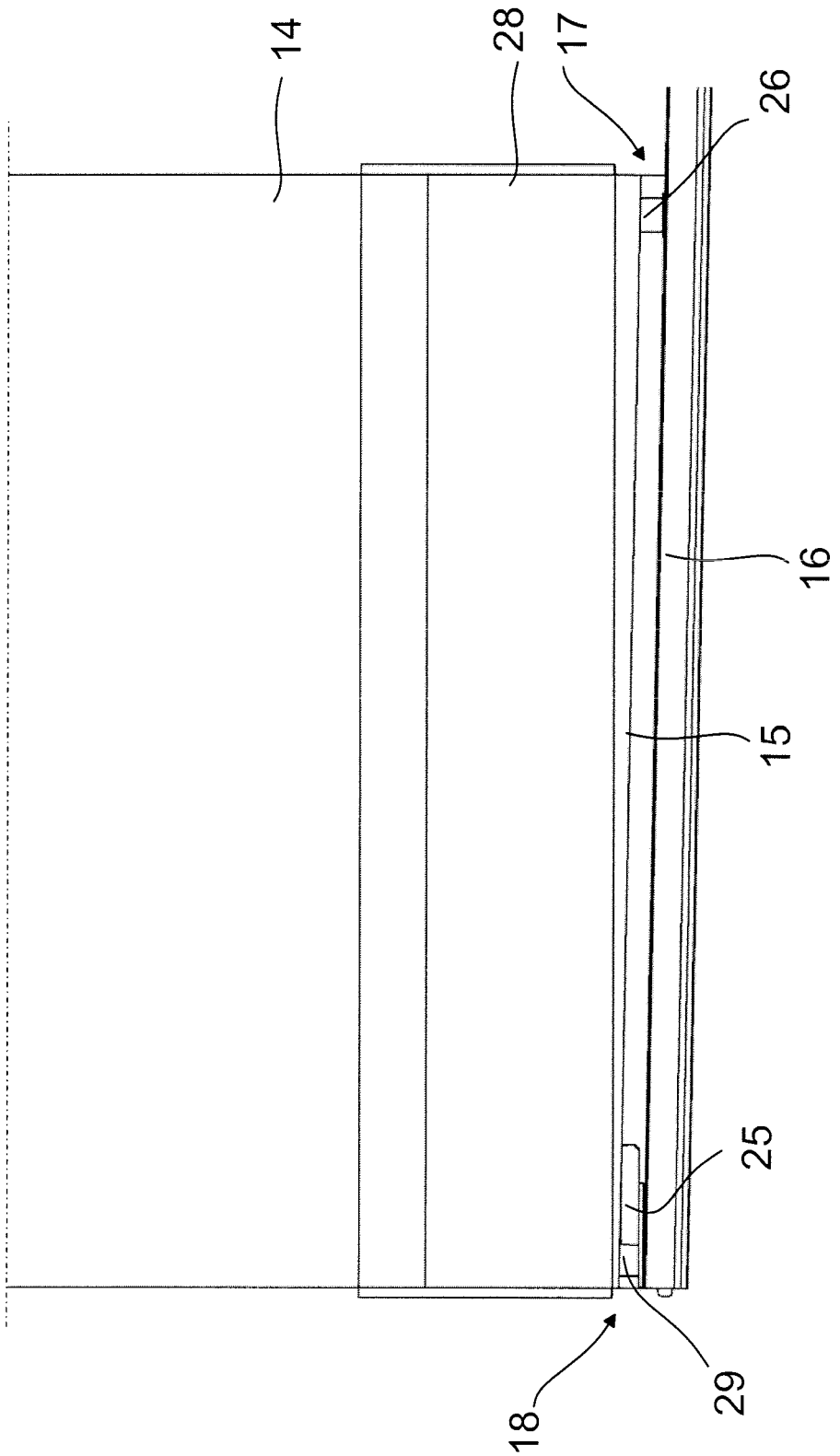

Fig. 3

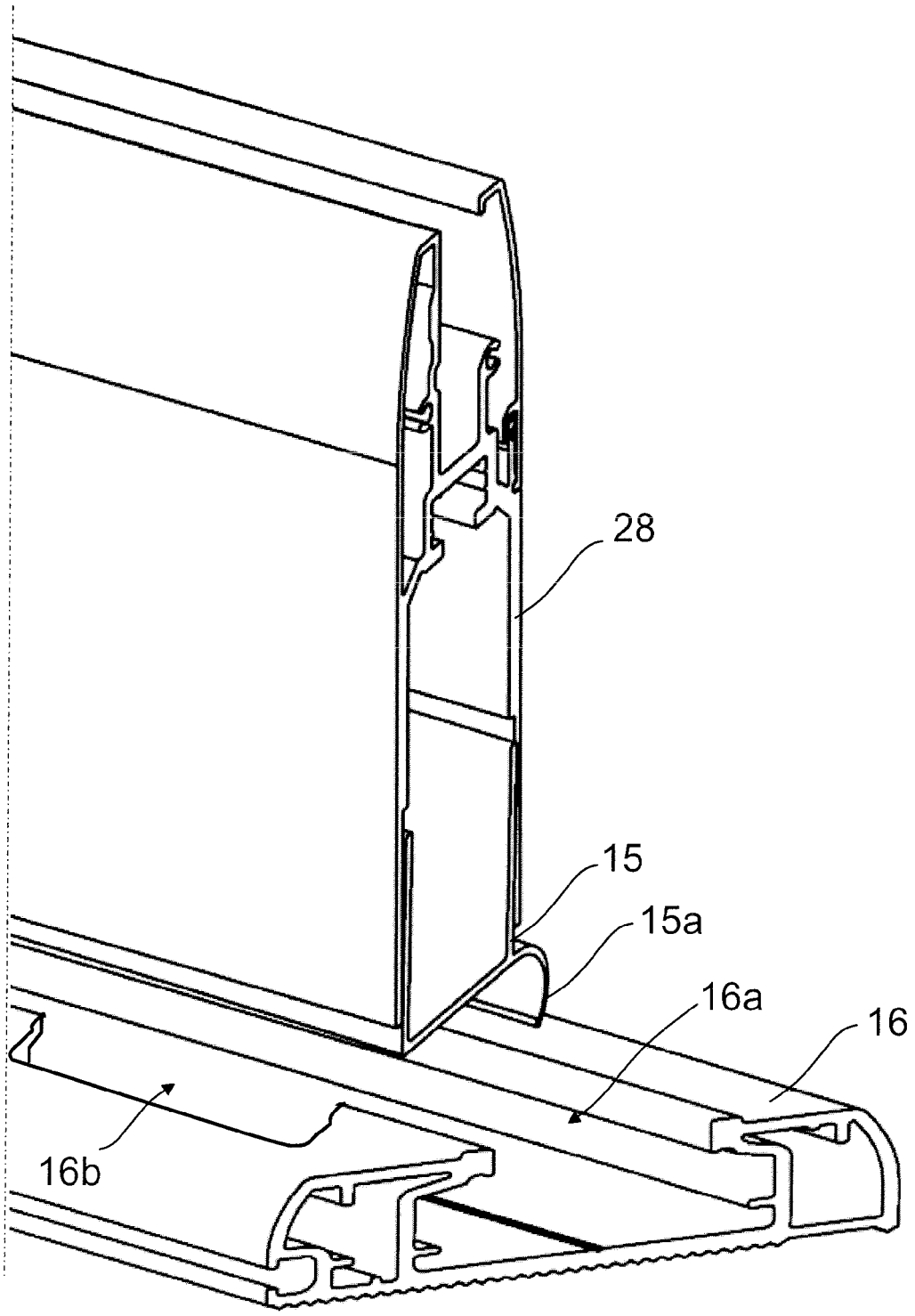

Fig. 4

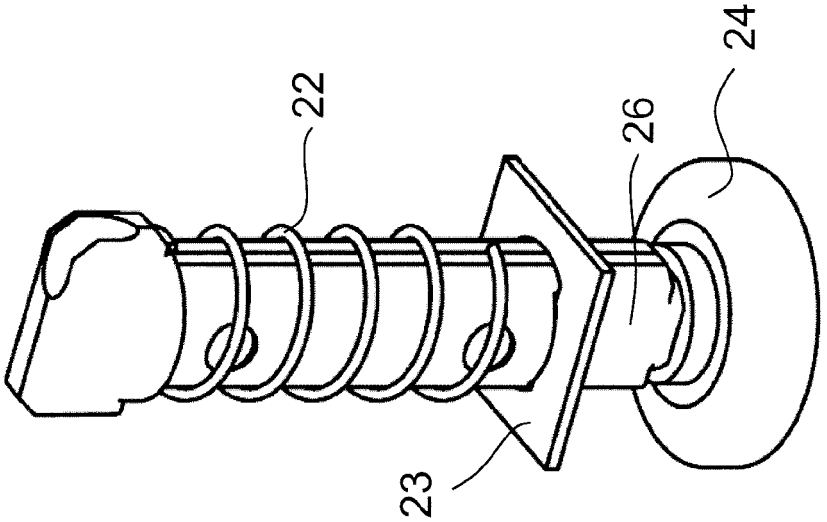

Fig. 6

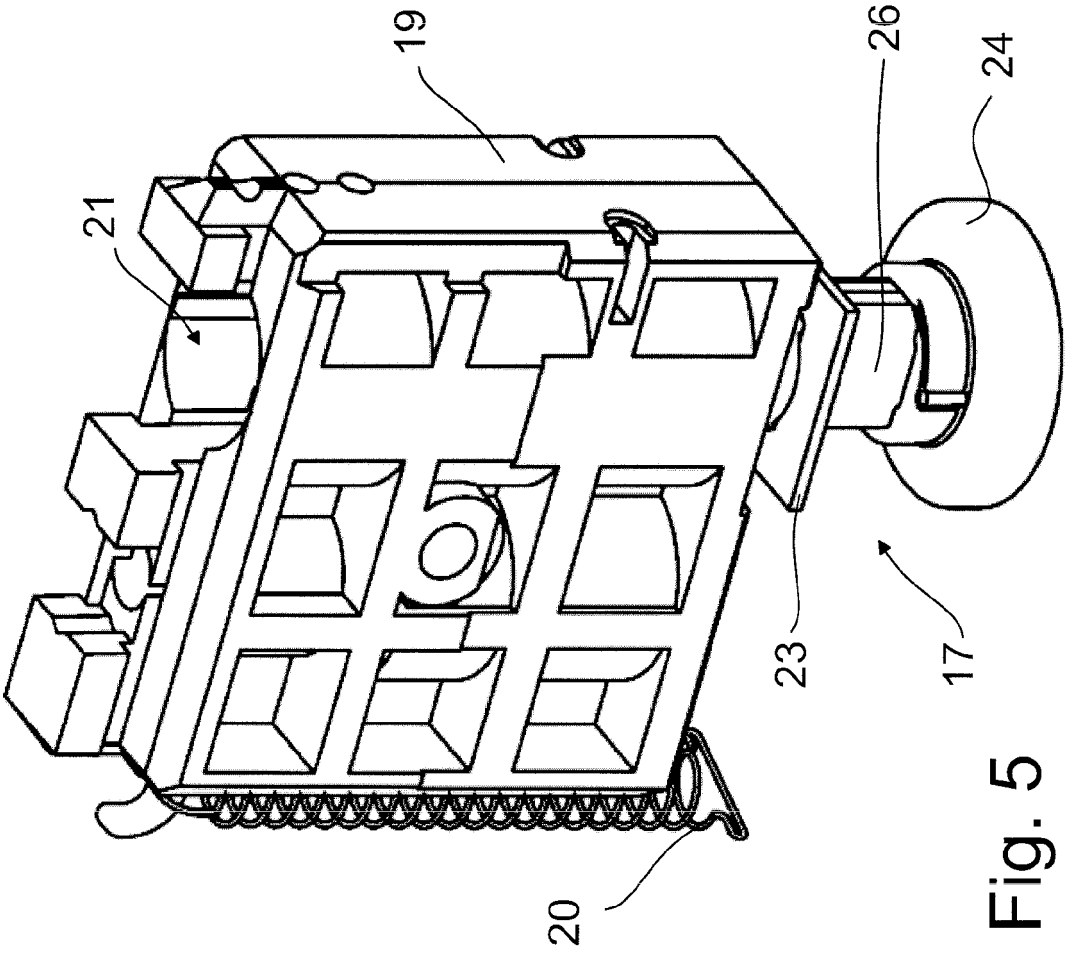

Fig. 5

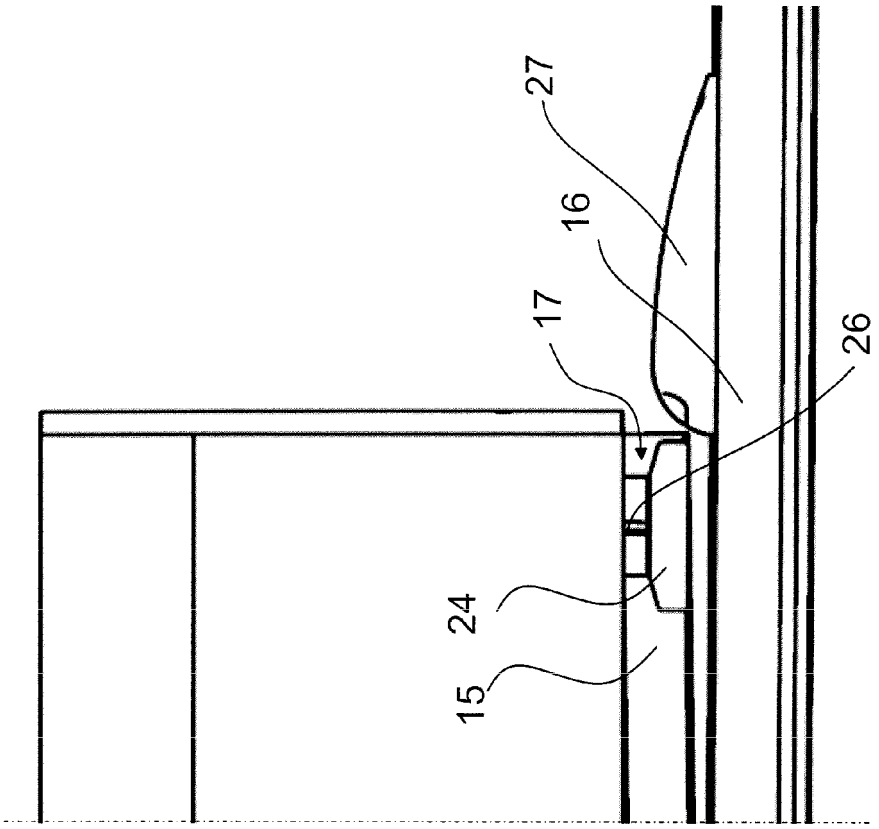

Fig. 8

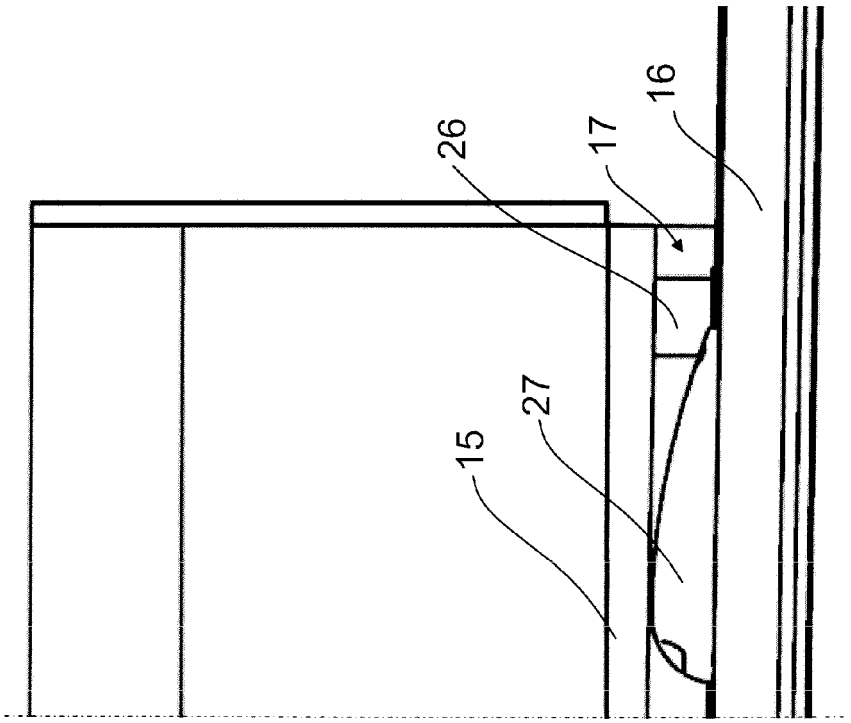

Fig. 7

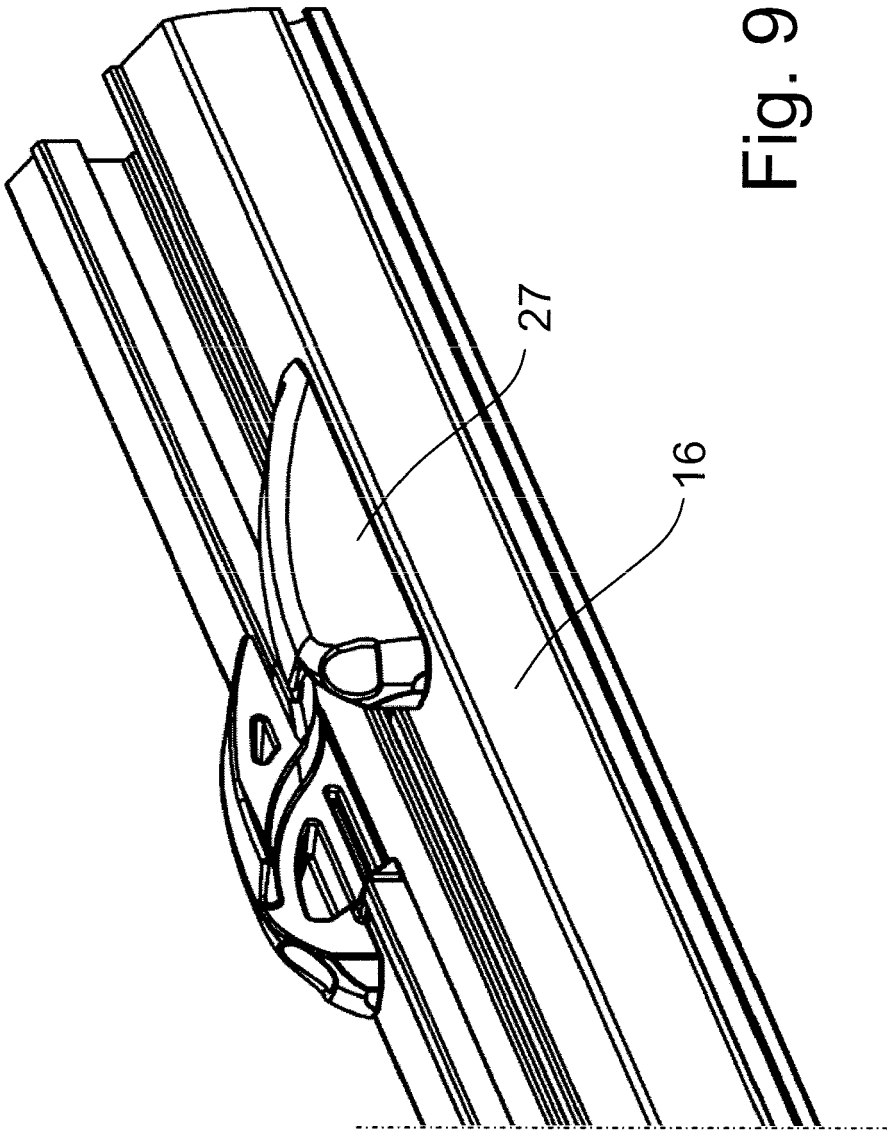

Fig. 9

REFERENCES CITED IN THE DESCRIPTION

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