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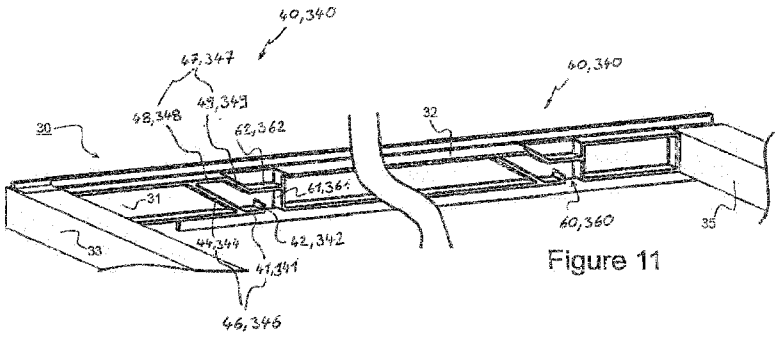

Figure 11

(57) Abstract: The present invention is a home appliance (1), particularly a domestic refrigerator, comprising a container (10); a cover (20) for the container (10) which is hung in an adjustable manner between an open position where it is lifted on the container (10) and a closed position where it is lowered onto the container (10); a hanger bearing (40) which converts a linear horizontal motion of the cover (20) into upward or downward motion; a hanger (70) which is hung to the hanger bearing (40) in a connected manner to the cover (20); and a bearing element (30) with fixed position and having hanger bearing (40), characterized in that the bearing element (30) has an insertion opening (60) which guides the hanger (70) towards the hanger bearing (40).

WO 2016/107748 A1

SPECIFICATION

A HOME APPLIANCE COMPRISING A CONTAINER HAVING A MOVABLE COVER

TECHNICAL FIELD

The present invention relates to a home appliance, particularly a domestic refrigerator comprising a container, and a cover for the container, and which stays hung in an adjustable manner between an open position where the cover is lifted on the container and a closed position where the cover is lowered to the container.

STATE OF THE ART

In a home appliance comprising container, particularly in a domestic refrigerator, in general, there is a container in drawer form. In the container, particularly in the container used in the refrigerator, fresh foodstuff like vegetable and fruit is kept.

Fresh foodstuffs begin releasing their humidity after being harvested. This leads to deterioration of the fresh foodstuff, rendering the foodstuff inedible at the end. The cool ambiance provided in the refrigerator decelerates the deterioration. However, humidity control is realized in the ambiance where the fresh foodstuff is kept, and if a suitable humidity proportion is preserved, the humidity loss of the fresh foodstuff can be decelerated or stopped. Thus, the lifetime of the fresh foodstuff can be extended.

Therefore, a cover is used which is hung in an adjustable manner for providing humidity control in said containers. These covers are opened by being lowered onto the container manually, or opened by being lifted from the container. Said motions are realized by moving the cover in the horizontal direction by means of a control element and converting said horizontal motion of the cover into upward and downward motion. Conversion of the horizontal motion into vertical motions is realized by means of hanger bearings keeping the cover in a hung manner.

An exemplary home appliance is disclosed in the patent application document with publication number WO2011026750A2. Said invention is a cooling device. There is a

container in the cooling device. The container has a cover which is displaced between an open and a closed position. The cover is positioned in a hung manner to a horizontal wall. There are profiles on said horizontal wall. Vertical plates extend downwardly from the profiles, and the front profiles of these plates have slits which are inclined downwardly. Pins are provided at the front corners of the cover. By means of the downwardly inclined slits, the pins convert a linear motion of the cover into a raising motion for opening and closing the cover. Therefore, the cooling device has a manually controlled slider which can move along the front edge of the container. The slider provides the cover to make the mentioned linear motion by means of a section thereof inside an inclined horizontal slit provided on the cover.

The invention provides an additional improvement, an additional advantage or an alternative to the present art described above.

OBJECT OF THE INVENTION

The main object of the present invention is to provide a home appliance comprising a container having a cover whose assembly to the bearing element is facilitated.

In order to achieve the abovementioned object, the present invention is a home appliance, particularly a domestic refrigerator, comprising a container; a cover for the container which is hung in an adjustable manner between an open position where it is lifted on the container and a closed position where it is lowered onto the container; a hanger bearing which converts a linear horizontal motion of the cover into upward or downward motion; a hanger which is hung to the hanger bearing in a connected manner to the cover; and a bearing element with fixed position and having hanger bearing. The bearing element has an insertion opening which guides the hanger towards the hanger bearing. Thus, lifting the cover, brought under the bearing element, may be sufficient for hanging the hanger to the hanger bearing. Thus, the hanging process can be facilitated.

In a possible embodiment of the present invention, the hanger has an extension which extends in a parallel manner with respect to the cover. Thus, the cover can be hung before the cover gets closer to the walls of the home appliance liner. By means of this, the cover can be prevented from contacting the liner walls during the motion, from damaging the walls and/or from leading to noise.

In a possible embodiment of the present invention, the extension of the hanger has an upper section which is flattened horizontally. Thus, the extension can rise inside the hanger bearing more than an extension having a circular upper section. Therefore, the hanger bearing and thus the bearing element occupy less volume compared to a bearing element where an extension having circular upper section is used. By means of this, moreover, the material amount required for obtaining the bearing element can be reduced. Accordingly, for instance, the extension may have a semi-circular cross section or it may be in the form of a cut-circle which has been cut by a straight line passing through a point existing on the radius thereof; or the extension may have a half ring cross section or it may be in the form of a partial ring which has been cut by a straight line passing through a point on the radius thereof.

In a possible embodiment of the present invention, the extension has a circular lower section which is in contact with the hanger bearing. Thus, the surface area of the lower section which contacts the hanger bearing can be reduced. Therefore, the friction force can be kept low, and cover can be moved by less force. In other words, the motion of the cover can be facilitated. For this purpose, for instance, it may have a semi-circular cross section or it may be in the form of a cut-circle which has been cut by a straight line passing through a point existing on the radius thereof; or it may have a half ring cross section or it may be in the form of a partial ring which has been cut by a straight line passing through a point existing on the radius thereof.

In a possible embodiment of the present invention, the bearing element has a vertical insertion wall which guides the hanger vertically to the hanger bearing. Thus, the user who fixes the cover can be guided by the vertical insertion wall even if he/she does not see or partially sees the hanger and the hanger bearing. Thus, the cover hanging process can be facilitated.

In a possible embodiment of the present invention, the bearing element has a horizontal insertion wall which guides the hanger horizontally to the hanger bearing. Thus, the user who fixes the cover can be prevented from lifting the cover excessively even if he/she does not see or partially sees the hanger and the hanger bearing. Thus, the cover hanging process can be facilitated.

In a possible embodiment of the present invention, the hanger bearing has a lower wall and an upper wall extending in a manner forming a movement line for the hanger, on a vertical

wall of the bearing element. Thus, a hanger bearing, which has a movement line where the hanger is restricted, can be obtained. This may provide that the cover moves smoothly and stably. Moreover, the accidental removal of the hanger from the hanger bearing can also be prevented. Thus, the cover can realize its function without interruption and without failure.

In a possible embodiment of the present invention, the lower wall has a lower housing wherein the hanger is placed at a closed position of the cover. Thus, when the cover is in closed position, the accidental motion of the cover due to undesired impacts can be prevented. Moreover, the possible noises occurring due to a cover making unintentional motion can also be reduced or completely eliminated.

In a possible embodiment of the present invention, the lower housing has a stop wall provided on the side at the side opposite to the motion direction defined by the movement of the hanger towards the lower housing on the hanger bearing during the movement of the cover. In particular, the stop wall has the function to restrict the motion of the hanger after the hanger has reached the lower housing or the upper housing, respectively, i.e. an end position. In particular, the lower housing defines an end position of the hanger, in which the cover is in a closed position. In particular, the upper housing defines an end position of the hanger, in which the cover is in an opened position.

Thus, the hanger can be prevented from removing from the hanger bearing in case where excessive force is applied for moving the cover and/or in case of unintentional impacts and/or in case the cover tends to move as a result of its own weight. On the other hand, the hanger, which tends to continue its movement as a result of inertia rule, can be stopped by the stop wall. Keeping the hanger inside the hanger bearing may extend the usage lifetime of the system. Additionally, the failure risk can be reduced.

In a possible embodiment of the present invention, the lower wall has an inclined section acting as a rail for the hanger between the lower housing and the upper wall. Thus, a restrictive movement line can be obtained for the hanger together with the inclined section of the lower wall. By means of this, cover moves smoothly and stably. Moreover, the accidental removal of the hanger from the hanger bearing can also be prevented. Thus, the cover can realize its function without interruption and without failure.

In a possible embodiment of the present invention, the upper wall has an upper inclined section in a manner forming a movement line for the hanger, together with the inclined section of the lower wall. Thus, a hanger bearing, which has a movement line where the hanger is restricted, can be obtained. By means of this, cover moves smoothly and stably. Moreover, the accidental removal of the hanger from the hanger bearing can also be prevented. Thus, the cover can realize its function without interruption and without failure.

In a possible embodiment of the present invention, the upper wall has an upper flat wall which determines the final point to be reached by the hanger in the open position of the cover. Thus, the accidental removal of the hanger from the hanger bearing can also be prevented. Thus, the cover can realize its function without interruption and without failure.

In a possible embodiment of the present invention, an upper face of the cover and the extension can be vertically spaced apart from each other. Thus, a clearance can be provided between the container and the bearing element where the cover is hung. By means of this clearance, during the removal of the container from the home appliance or during the placement of the container into the home appliance, the container is prevented from being obstructed by the bearing element or from damaging the bearing element and/or from leading to noise as a result of contact of the container to the bearing element.

In a possible embodiment of the present invention, the hanger can have a hanger wall provided on the upper face of the cover and whereon an extension is provided. Thus, the advantages of the clearance provided between the extension and the cover can be provided by a robust hanger embodiment. The hanger wall can support a heavy cover by means of a wide surfaced wall, or it can support the cover for long time duration. This may extend the usage lifetime of the home appliance.

BRIEF DESCRIPTION OF THE FIGURES

Figure 1 is the perspective view of a possible home appliance where the front door is open.

Figure 2 is the perspective view of a possible container where the cover and plate provided thereon are moved away from each other.

Figure 3 is the perspective view of a possible bearing element.

Figure 4 is the perspective view of a possible cover.

Figure 5 is the Detail A view of a possible hanger given in Figure 4.

Figure 6 is the Detail B view of a possible hanger given in Figure 4.

Figure 7 is the perspective view of another possible cover.

Figure 8 is the Detail C view of a possible hanger given in Figure 7.

Figure 9 is the lateral view of the hanger bearing, provided on the front side of the bearing element in Figure 3, from the right side.

Figure 10 is the lateral view of the hanger bearing, provided on the rear side of the bearing element in Figure 3, from the right side.

Figure 11 is the perspective view of the hanger bearings in another possible bearing element.

Figure 12 is a perspective view of a section of the bearing element with the hanger bearing as shown in figure 9.

Figure 13 is a view of the section of the bearing element as shown in figure 12, wherein additionally a hanger is shown.

Figure 14 is a perspective view of a section of the bearing element with the hanger bearing as shown in figure 10.

THE DETAILED DESCRIPTION OF THE INVENTION

All directional references such as front, top and bottom are based on reference to the cooling device (1) shown in **Figure 1**, where the section provided at the upper side is described as “top”, the right side where a door (3) is provided is described as “right”. For instance, the door (3) of the home appliance (1) is illustrated where the door (3) is connected to the right side of

the front wall of the home appliance (1) and opened towards the right side. One or more of possible embodiments of the present invention will be described as examples in detail below.

The home appliance (1) is a domestic refrigerator as shown in **Figure 1**. In a liner (2) of the home appliance (1), there is a container (10) wherein products like vegetable, fruit, milk products and/or meat products are placed. The container (10) has a base (11), and four side walls (12) rising from said base (11) (**Figure 2**). The upper section of the container (10) has an opening (13) for providing access to the inner space defined. The container (10) can be drawn out of the home appliance (1) and it can be pushed into its place again. When the container (10) is inside the home appliance (1), there is a plate (14) thereon. The plate (14) can be used as a shelf. Therefore, the plate (14) is obtained from glass or from a different material like plastic whose load resistance is high.

There is a cover (20), for closing the container (10) in a controlled manner, between the container (10) and the plate (14). The cover (20) is hung on a bearing element (30). There is a slider (16) at the front edge (15, 33) on the plate (14) and on the bearing element (30). When the slider (16) is slid to the right or to the left along the front edge (15, 33), the cover (20) lowers towards the container (10) or it rises upwardly with respect to the container (10).

For providing said movement transfer, said bearing element (30) is used. The bearing element (30) is fixed to the plate (14) in a manner staying under the plate (14). Afterwards, the bearing element (30) is connected in a fixed manner to the liner (2) of the home appliance (1) together with the plate (14).

The bearing element (30) is in the form of a frame with three edges where it has two mutual side edges (32) and a front edge (33) (**Figure 3**). It has no rear edge. However, optionally, it can also be designed as a quadrangular frame (**Figure 11**) having rear edge (35). The bearing element (30) has one or more than one hanger bearing 40, 340 thereon. The hanger bearing 40, 340 is provided on a vertical wall (31) of the bearing element (30). The bearing element (30) illustrated in **Figure 3** comprises four hanger bearings 40 such that there are two hanger bearings 40, 240 at the rear ends and such that there are two hanger bearings 40 at positions close to the front corners. The front hanger bearings 40illustrated in the figure are under the slits (34) viewed at the front corners of the bearing element (30) and inside the profile forming the bearing element (30).

The cover (20) is in the form of a flat plate as exemplified in **Figure 4**. Thus, in the closed position, the cover (20) may cover the opening (13) of the container (10) which is in a box form. In a position of the cover (20) which is close to the slider (16), this position is the middle region of the front section of the cover (20), and it comprises a slider housing (22). Thus, the cover (20) realizes linear motion by means of the slider (16). The slider housing (22) illustrated in the figure is an inclined channel provided on the upper face (21) of the cover (20) and provided in a form diverging gradually from the front edge of the cover (20). The slider housing (22) can be a hole provided on the upper face (21) of the cover (20) and which is close to the front edge of the cover (20) as illustrated in **Figure 4**. The slider housing (22) can be in the form of housing in shaft cross section for a shaft (**Figure 7**); or it can be a linear channel which is parallel to the front edge.

One each hanger (70) is provided at the four corners of the cover (20). The hanger (70) has a hanger wall (71) extending upwardly from the upper face (21) of the cover (20) in a vertical manner. The hanger wall (71) faces the right or left of the cover (20). In other words, the hanger wall (71) faces towards the side edges (32) of the bearing element (30) whereon the hanger bearing (40) is provided. On the hanger wall (71), one or more than one support walls (72) can be provided in a combined manner vertically with respect to the hanger wall (71) (**Figure 8**).

On the hanger wall (71), there is an extension (73) extending towards the side edges (32) of the bearing element (30). The extension (73) in **Figure 5** and **Figure 6** is a pin. The extension (73) can be separated into an upper section (74) and a lower section (75). The lower section (75) has a circular form. The upper section (74) can be circular or it can be horizontally flattened. Accordingly, the cross sectional shape of the pin can be a circle, a ring, a semi-circle, a semi-ring, a semi-circle which has been cut by a straight line passing through a point existing on the radius thereof, or a partial ring which has been cut in the same manner. Two alternatives mentioned in the figures are the full-circle (**Figure 5** and **Figure 6**) and a cut ring (**Figure 8**).

In **Figure 9** and **Figure 10**, the hanger bearings 40, 240, formed on the left side edge (32) of the bearing element (30), are illustrated from the right side. In **Figure 9**, the hanger bearing

40, 140 provided on the front side is illustrated, and in **Figure 10**, the hanger bearing 40, 240 provided on the rear side is illustrated.

The front hanger bearing 40, 140 is provided on a vertical wall (31) of the bearing element (30). The hanger bearing 40, 140, provided in **Figure 9**, is in the form of a strip. At a point which is close to the rear end of the strip, when the cover (20) is in closed position, there is a lower housing 41, 141 where the hanger extension (73) is placed.

The lower housing 41, 141 is provided at a position which is vertically lower and which is more rear from the upper housing 43, 143 horizontally. The lower housing 41, 141 is in spring form in a compliant manner to the circular extension (73) when viewed laterally as given in the figure. However, optionally, for extension (73) with different shapes, it can be obtained in a form compliant to the extension (73). Moreover, for instance, for a circular extension (73), it can have a cornered form such that the circular extension (73) can be placed. At the rear end of the lower housing 41, 141, there is a stop wall 42, 142. Thus, due to the force applied by the slider (16) and due to the own weight of the cover (20), the lowering motion can be stopped at the required point. The stop wall 42, 142 can be provided by means of raising the rear end of the lower housing 41, 141. On the other hand, a wall, provided at the bearing element (30) and which faces the coming direction of the hanger (70), can be used as the stop wall 42, 142.

The upper housing 43, 143 is in the form of a spring from the lateral side like a lower housing 41, 141. However, it can be in different shapes as described for the lower housing 41, 141. An inclined section 44, 144 is provided between the upper housing 43, 143 and the lower housing 41, 141 such that the hanger (70) provides a rail particularly for the extension (73). Depending on the requirement of the design, specific length of horizontal section 45, 145 can be provided in front of, behind or both sides of the inclined section 44, 144.

The rear hanger bearing 40, 240 is an opening provided on a vertical wall (31) of the bearing element (30) in a manner lowering downwardly and from the front side to the lower side (**Figure 10**). However, optionally, the rear hanger bearing 40 and the front hanger bearing 40 can be provided in the same manner.

In a second embodiment of the bearing element (30) illustrated in **Figure 11**, hanger bearings 40, 340 are provided in the same manner at the front side and at the rear side. The hanger bearing 40, 340, given in the figure, comprises a lower wall 46, 346 and an upper wall 47, 347. Both of them extend from a vertical wall (31) of the bearing element (30).

The lower wall 46, 346 has an inclined section 44, 344 from the front side to the rear side and from the upper side to the lower side. At the lower end of the inclined section 44, 344, there is a lower housing 41, 341 for the extension (73) of the hanger (70). The lower housing 41, 341 comprises a horizontal wall. In a similar manner to the first embodiment, a stop wall 42, 342 rises upwardly from the rear end of said horizontal wall.

The upper wall 47, 347 comprises an upper inclined section 49, 349 in a parallel manner to the inclined section 44, 344 of the lower wall 46, 346. A clearance, through which at least one extension (73) can pass, is provided between the upper inclined section 49, 349 and the inclined section 44, 344. Thus, a movement line is formed for the extension (73). At the upper end of the upper inclined section 49, 349, there is a horizontal upper flat wall 48, 348. The upper flat wall 48, 348 extends between the upper inclined section 49, 349 and the upper ends of the inclined section 44, 344. Thus, the end of the movement line is formed for the extension (73). The extension (73) is stopped onto the upper flat wall 48, 348 and it finishes the raising motion of the cover (20).

When the cover (20) is desired to be hung to the bearing element (30), the cover (20), brought under the bearing element (30), is moved upwardly. The extension (73) passes through an insertion opening 60, 360 provided at the bearing element (30), and it is placed to the hanger bearing 40, 340.

In the first hanger bearing (40, 140 embodiment, the insertion opening 60, 160 is formed at the front side of the hanger bearing 40, 140. Here, the insertion opening 60, 160 is provided between the front end of the hanger bearing 40, 140 and a vertical insertion wall 61, 161 provided in a spaced apart manner with respect to said front end.

In the second hanger bearing 40, 340 embodiment, the insertion opening 60, 360 is provided between the stop wall 42, 342 and a vertical insertion wall 61, 361 formed behind the hanger bearing 40, 340 in a spaced apart manner from the stop wall 42, 342. Moreover, in the

second embodiment, there is a horizontal insertion wall 62, 362 extending from the lower end of the upper inclined section 49, 349 to the vertical insertion wall 61, 361. Thus, the extension (73) is directly guided to the hanger bearing 40, 340. A similar horizontal insertion wall 62, 362 can also be provided in the first embodiment. For instance, a horizontal insertion wall 62, 362 can extend from the vertical insertion wall 61, 161 to the hanger bearing 40, 140. A width, through which the extension (73) can pass, can be left between the horizontal insertion wall 62, 362 and the hanger bearing 40, 140 end where the upper housing 43, 143 is provided.

After the cover (20) is hung to the bearing element (30), fixed to the liner (2) of the home appliance (1), by means of the hanger (70) and the hanger bearing 40, 140, 240, 340, the container (10) is placed to the home appliance (1) in a manner corresponding to the lower section of the cover (20). When the container (10) is drawn out of the home appliance (1), the cover (20) continues to preserve its position. In other words, the container (10) can move independently from the cover (20).

Figure 12 shows a section of the bearing element 30 with the hanger bearing 40, 140 as shown in figure 9. The bearing element 30 comprises a vertical insertion wall 61, 161, an insertion opening 60, 160 and the hanger bearing 40, 140. The hanger bearing 40, 140 is formed by a ridge. In other words, the hanger bearing 40, 140 has a ridge-like structure. The hanger bearing 40, 140 protrudes from the vertical wall 31. The hanger bearing 40, 140 comprises an upper housing 43, 143 being formed by a curved section. The hanger bearing 40, 140 comprises a lower housing 41, 141 being formed by a curved section. The upper housing 43, 143 is vertically higher than the lower housing 41, 141. The bearing element 30 comprises a stop wall 42, 142, which is arranged at an end 148 of the lower housing 414, 141 or in the near or the lower housing 41, 141.

The stop wall 42, 142 has the function to restrict the motion of the hanger after the hanger 70 has reached the lower housing 42, 142, i.e. an end position. In particular, the lower housing 42, 142 defines an end position of the hanger 70, in which the cover 20 is in a closed position. In particular, the upper housing 43, 143 defines an end position of the hanger 70, in which the cover 20 is in an opened position. The upper housing 43, 143 includes an end 147. A further stop wall (not shown) may be provided at the end 147 or in the near of the upper housing 43, 143. A horizontal section 45, 145 is arranged between the upper housing 43, 143

and the inclined section 44, 144. A horizontal section 45, 146 is arranged between the inclined section 44, 144 and the lower housing 41, 141.

Figure 13 is a view of the section of the bearing element 30 as shown in figure 12, wherein additionally a hanger 70 is shown. In figure 13, the hanger 70 is shown in a position, in which the cover 20 is in the closed position.

Figure 14 shows a section of the bearing element 30 with the hanger bearing 40, 240 as shown in figure 10. The hanger bearing 40, 240 is preferably formed by a slot or a recess or a groove.

REFERENCE NUMBERS

1. Home appliance
2. Liner
3. Door

10. Container
11. Base
12. Side wall
13. Opening
14. Plate
15. Front edge
16. Slider

20. Cover
21. Upper face
22. Slider housing

30. Bearing element
31. Vertical wall
32. Side edge
33. Front edge
34. Slit
35. Rear edge

40. Hanger bearing
41. Lower housing
42. Stop wall
43. Upper housing
44. Inclined section
45. Horizontal section
46. Lower wall
47. Upper wall
48. Upper flat wall
49. Upper inclined section

60. Insertion opening
61. Vertical insertion wall
62. Horizontal insertion wall

70. Hanger
71. Hanger wall
72. Support wall
73. Extension
74. Upper section
75. Lower section

CLAIMS

1. A home appliance (1), particularly a domestic refrigerator, comprising
a container (10);
a cover (20) for the container which is hung in an adjustable manner between an open position where it is lifted on the container (10) and a closed position where it is lowered onto the container (10);
at least a hanger bearing (40) which converts a linear horizontal motion of the cover (20) into upward or downward motion;
at least a hanger (70) which is hung to the hanger bearing (40) in a connected manner to the cover (20); and
a bearing element (30) with fixed position and having at least one hanger bearing (40), **characterized** in that the bearing element (30) has an insertion opening (60) which guides the hanger (70) towards the hanger bearing (40).

2. A home appliance (1) according to claim 1, wherein the hanger (70) has an extension (73) which extends in a parallel manner with respect to the cover (20).

3. A home appliance (1) according to any one of the preceding claims, wherein the extension (73) of the hanger (70) has an upper section (74) which is flattened horizontally.

4. A home appliance (1) according to any one of the preceding claims, wherein the extension (73) has a circular lower section (75) which is in contact with the hanger bearing (40).

5. A home appliance (1) according to any one of the preceding claims, wherein the insertion opening (60) faces downwardly towards the cover (20).

6. A home appliance (1) according to any one of the preceding claims, wherein the bearing element (30) has a vertical insertion wall (61) which guides the hanger (70) vertically to the hanger bearing (40).

7. A home appliance (1) according to any one of the preceding claims, wherein the bearing element (30) has a horizontal insertion wall (62) which guides the hanger (70) horizontally to the hanger bearing (40).

8. A home appliance (1) according to any one of the preceding claims, wherein the hanger bearing (40) has a lower wall (46) and an upper wall (47) extending in a manner forming a movement line for the hanger (70), on a vertical wall (30) of the bearing element (30).

9. A home appliance (1) according to claim 9, wherein the lower wall (46) has a lower housing (41) wherein the hanger (70) is placed at a closed position of the cover (20).

10. A home appliance (1) according to claim 10, wherein the lower housing (41) has a stop wall (42) provided on the side opposite to the motion direction defined by the movement of the hanger (70) towards the lower housing (41) on the hanger bearing (40) during the movement of the cover (20).

11. A home appliance (1) according to claim 10 or 11, wherein the lower wall (46) has an inclined section (44) acting as a rail for the hanger (70) between the lower housing (41) and the upper wall (47).

12. A home appliance (1) according to claim 12, wherein the upper wall (47) has an upper inclined section (49) in a manner forming a movement line for the hanger (70), together with the inclined section (44) of the lower wall (46).

13. A home appliance (1) according to any one of the claims 9 to 13, wherein the upper wall (47) has an upper flat wall (48) which determines the final point to be reached by the hanger (70) in the open position of the cover (20).

14. A home appliance (1) according to any one of claims 1 to 7, wherein the hanger bearing (40, 140) has a ridge-like form.

15. A home appliance (1) according to any one of claims 1 to 7, wherein the hanger element (30) comprises front hanger bearings (40, 140) and rear hanger bearings (40, 240, 340).

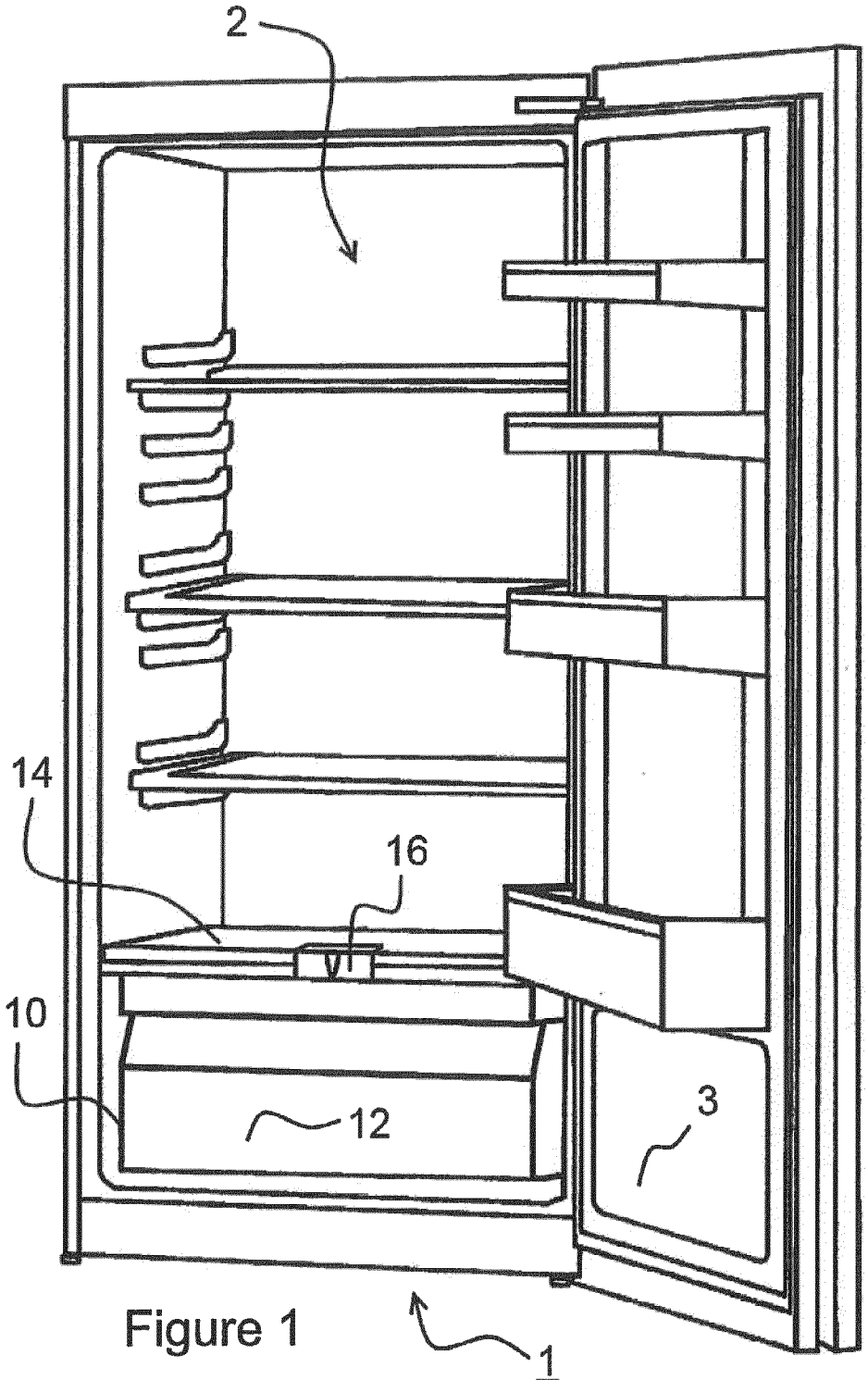

Figure 1

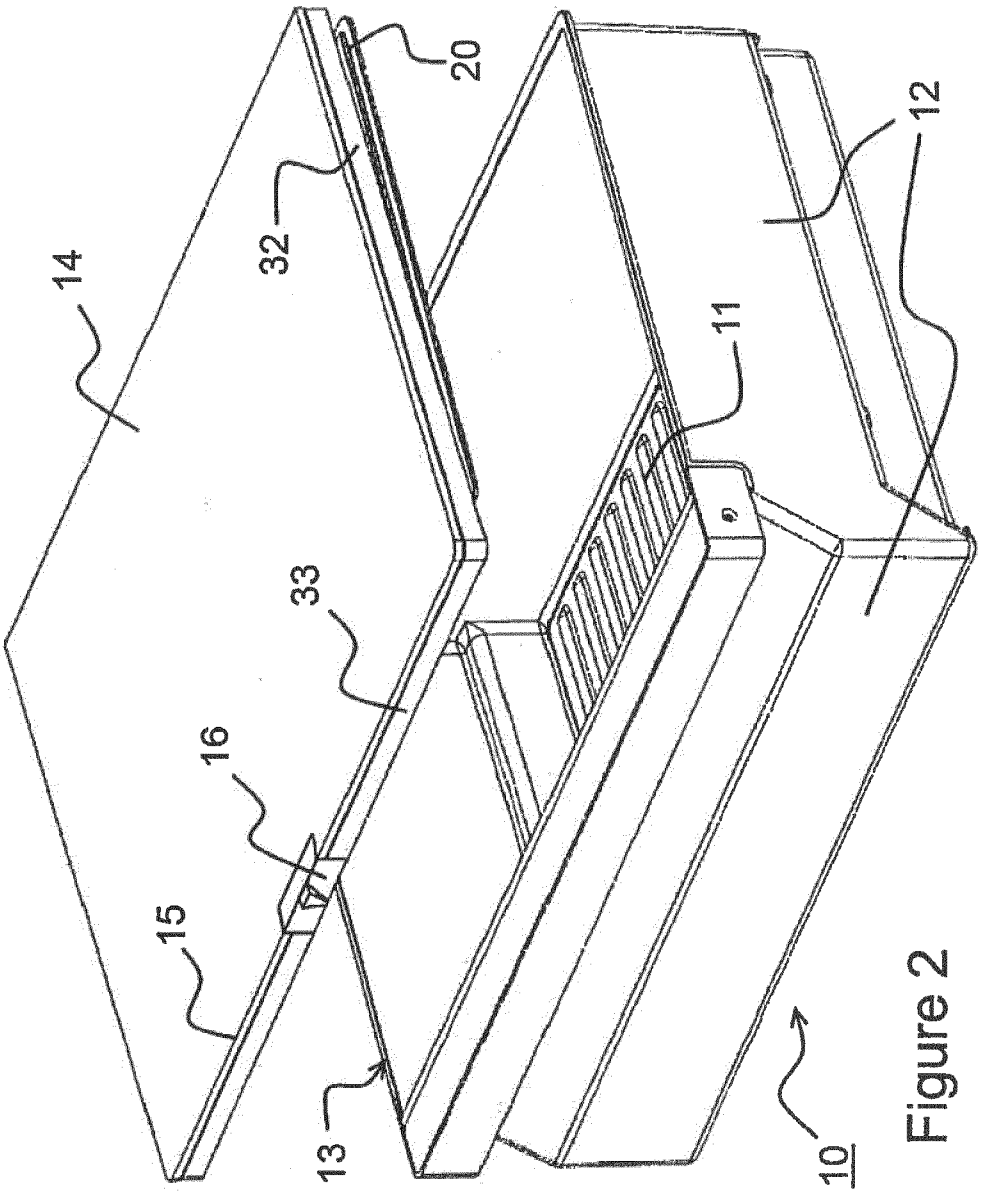

Figure 2

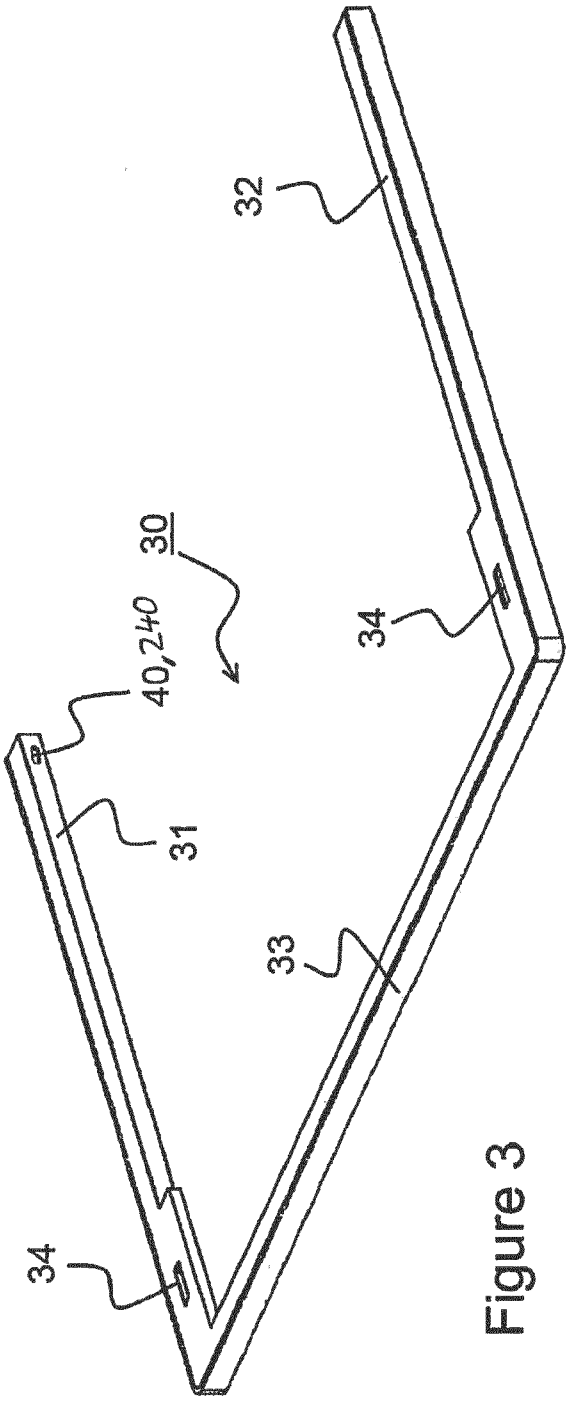

Figure 3

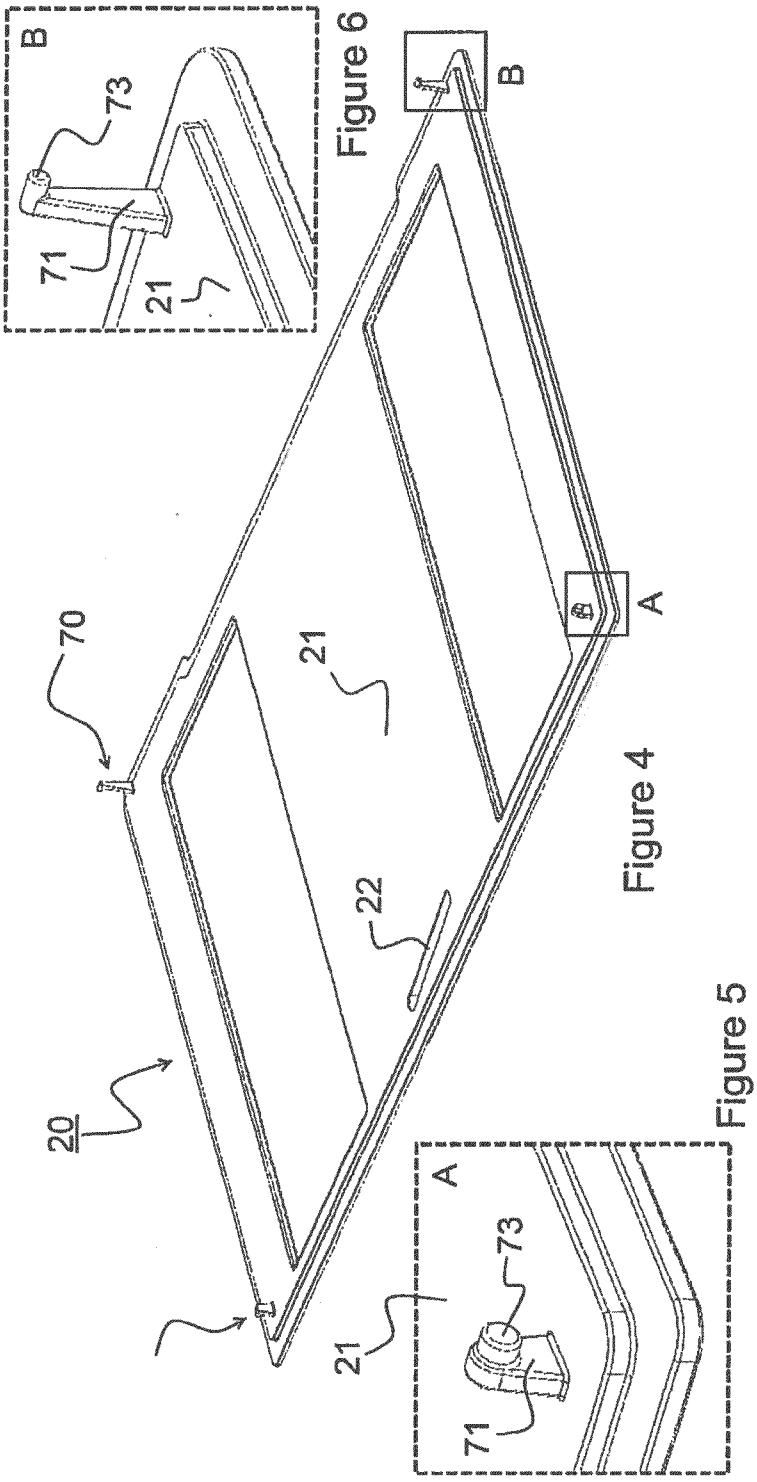
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Figure 6
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Figure 5

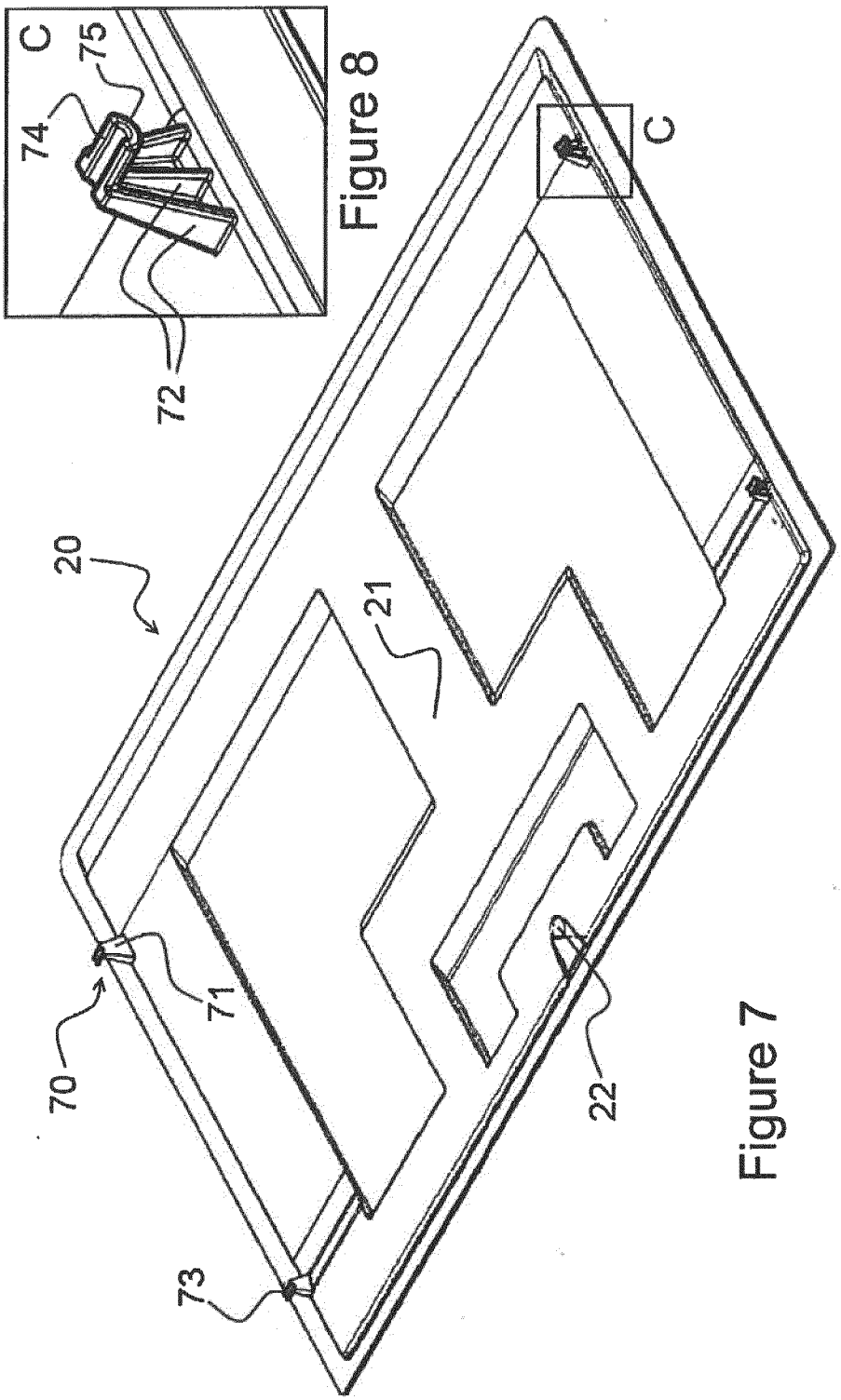

Figure 8

Figure 7

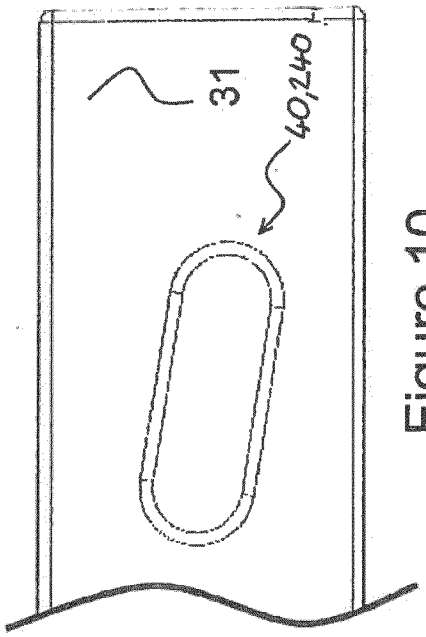

Figure 10

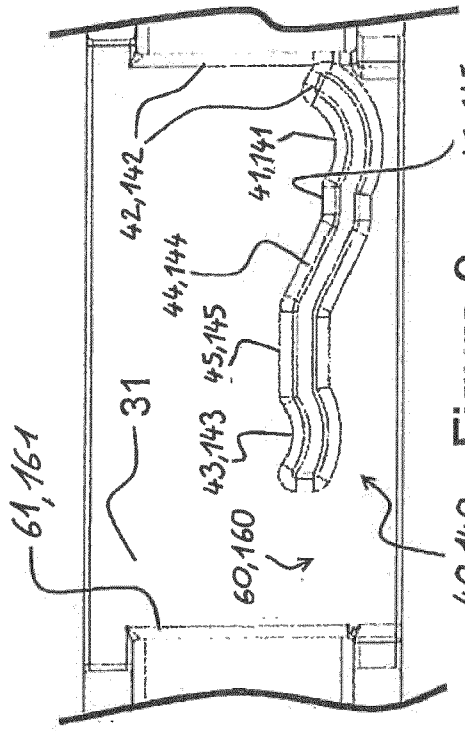

Figure 9

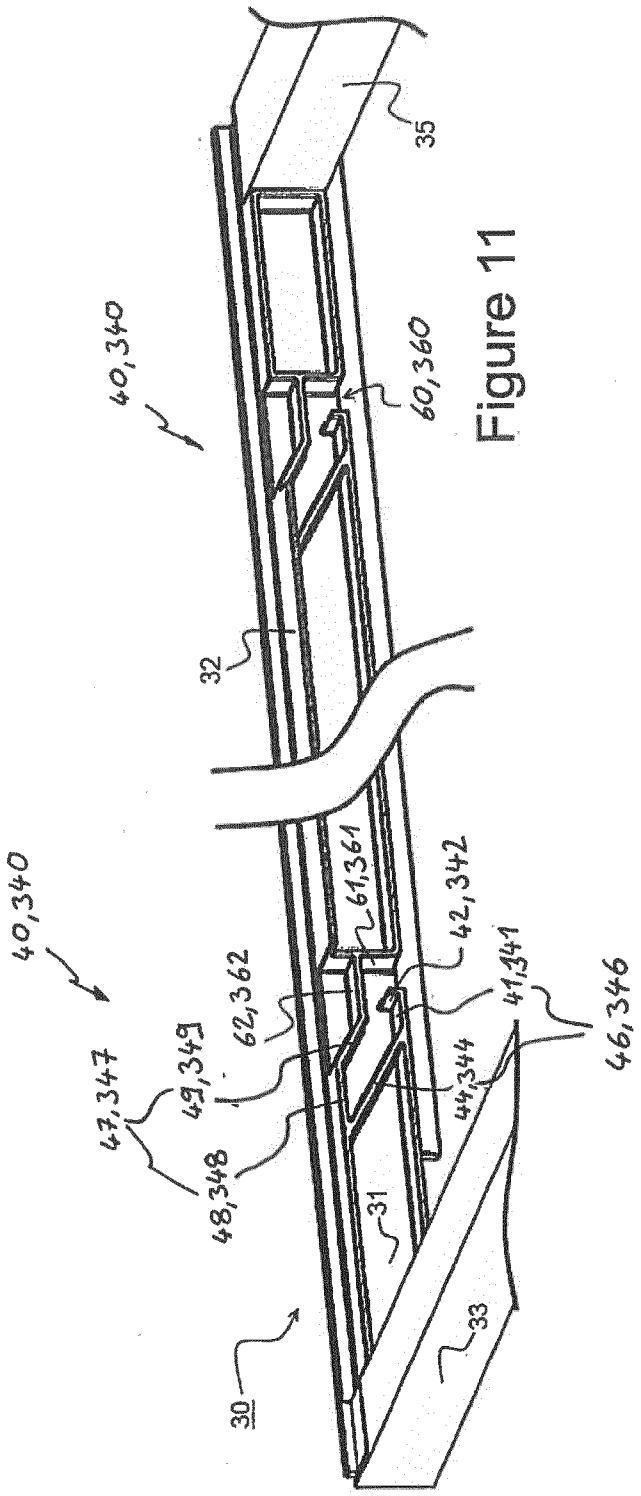
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Figure 11

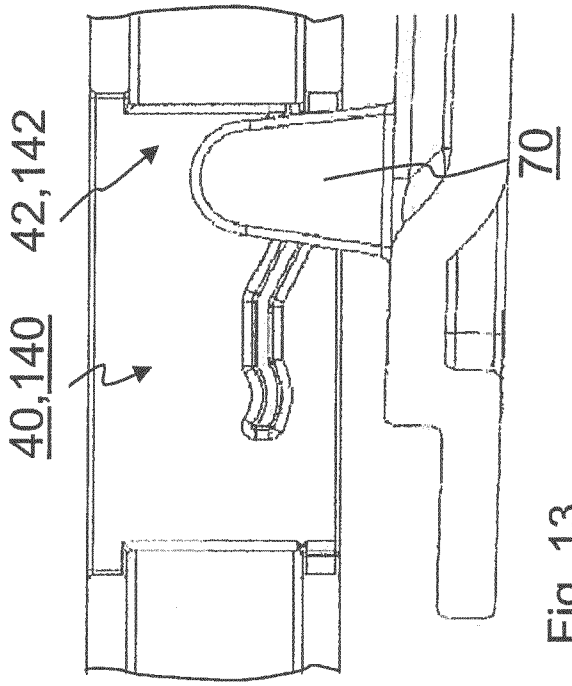

Fig. 13

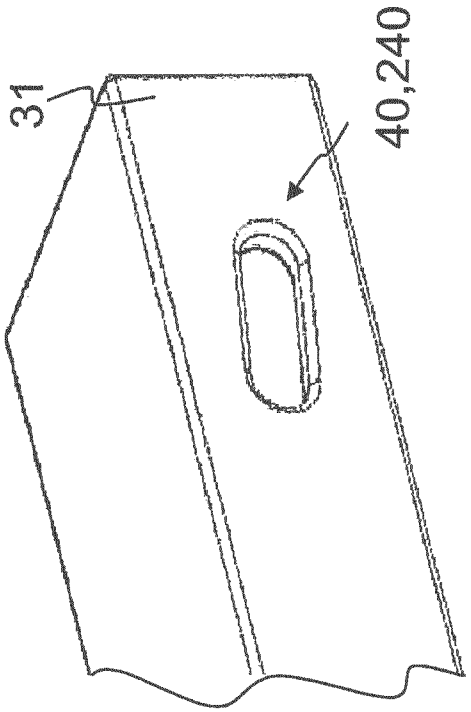

Fig. 14

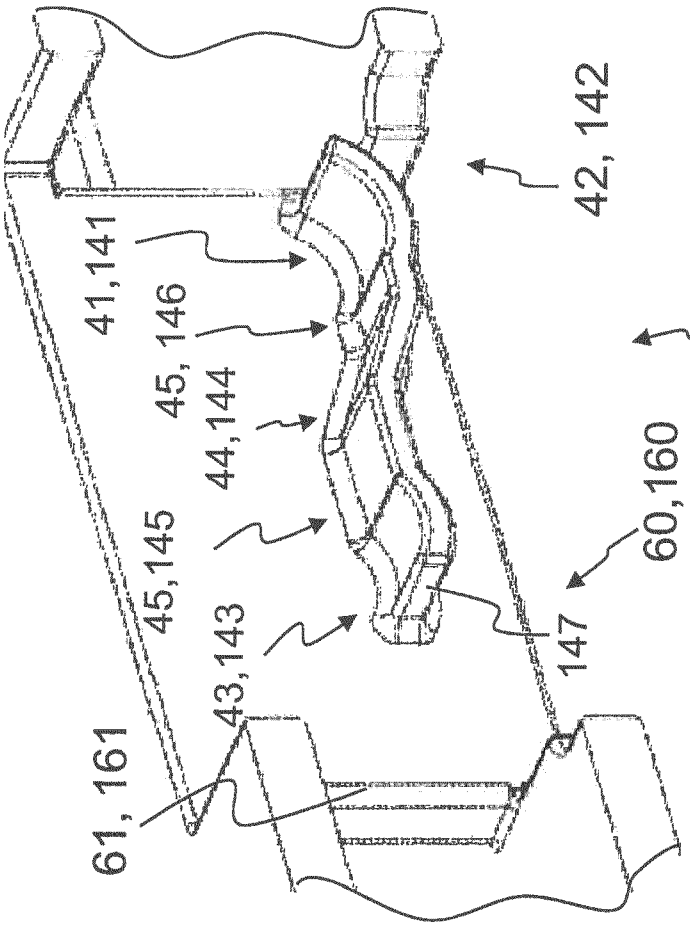

Fig. 12

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2015/080045

A. CLASSIFICATION OF SUBJECT MATTER
INV. F25D25/02 F25D23/06
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
F25D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 10 2013 201589 A1 (BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH [DE]) 31 July 2014 (2014-07-31)	1-3,6-9, 14,15
Y	abstract; figures 1-6 paragraphs [0043], [0058]	4,5, 10-13
Y	EP 0 365 936 A2 (KLINOTEC MED TECH [DE]) 2 May 1990 (1990-05-02)	4
A	abstract; figures 1-3	1
Y	JP 2003 269857 A (SANYO ELECTRIC CO) 25 September 2003 (2003-09-25)	5,10-13
A	abstract; figure 1	1
A	US 2009/058247 A1 (COLLINS BRYAN A [US] ET AL) 5 March 2009 (2009-03-05) the whole document	1-15

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
23 February 2016	11/03/2016

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Bejaoui, Amin

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2015/080045

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US 2009058247 A1	05-03-2009	NONE	