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(54) **Internal refrigerator component for containing and supporting food and bottles**

(57) An internal refrigerator component for containing and supporting foods and bottles (10) comprises a body (2) defined by a base (3), from the perimetral edge of which walls (4,5,6,7) upwardly extend to define an internal cavity of said body. One of said walls (7) is movable

relative to the adjacent walls and can be inclined to these latter within said cavity starting from a position raised from the base, said movable wall comprising on the corresponding edge of the base at least one projecting portion (12) intended to support a corresponding bottle when the wall is in said inclined position.

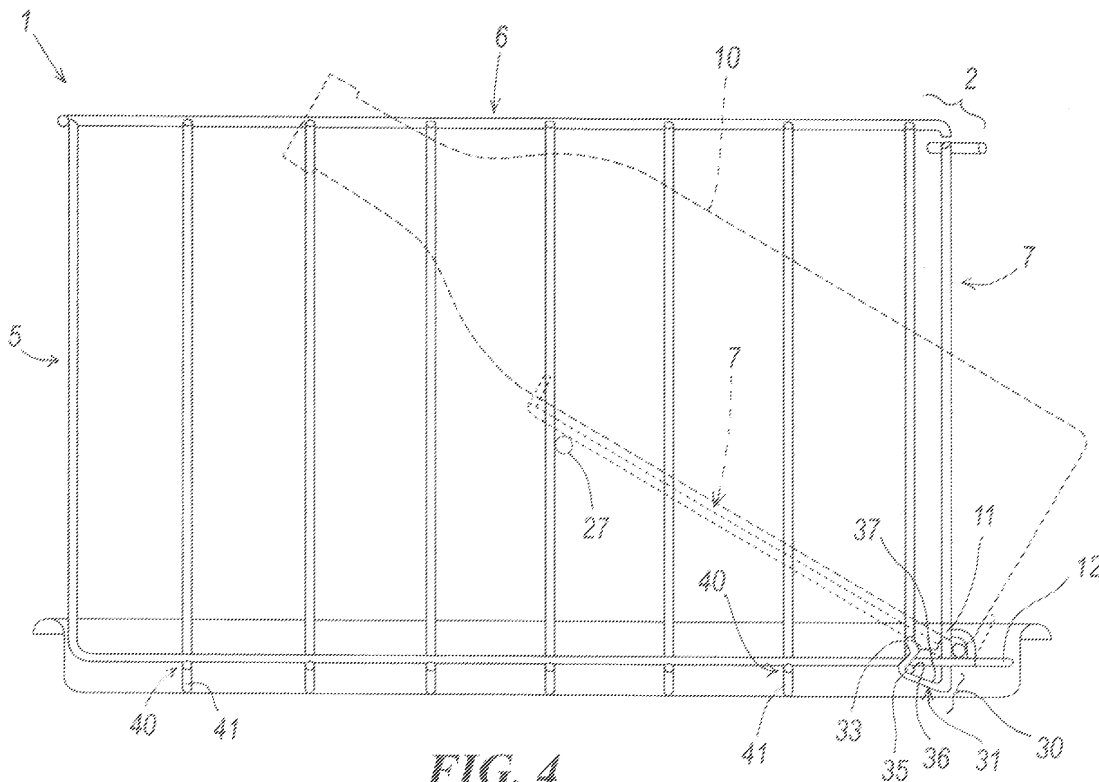


FIG. 4

Description

[0001] The present invention relates to an internal refrigerator component in accordance with the introduction to the main claim. The invention also relates to a refrigerator provided with this component.

[0002] Currently available refrigerators are known to be often provided with an internal container, for example for fruit and vegetable preservation, often movable as a displaceable drawer along a shelf or along a lower wall of a compartment (the preservation compartment) of the refrigerator. However this container or drawer does not enable bottles to be contained.

[0003] Devices are also known for supporting bottles within the refrigerator preservation compartment: the most common are defined by trays provided on the door panel of this compartment, but devices are also known for placing on a shelf within the compartment to support a bottle, including in an inclined position, this position being optimal in particular for wine bottles. Such devices are however often specific for bottles and do not enable other foods such as fruit, vegetables or voluminous foods to be contained.

[0004] An object of the present invention is to provide an internal refrigerator component which can be used both to contain foods, including of voluminous dimensions (such as fruit or vegetables), and to support at least one bottle.

[0005] A particular object of the invention is to provide a component of the stated type which enables each bottle to be supported in an inclined position, i.e. in an optimal position especially for supporting wine bottles.

[0006] Another object is to provide a component of the stated type which can be arranged to support at least one bottle only when necessary, this arrangement being obtainable easily and quickly.

[0007] These and further objects which will be apparent to the expert of the art are attained by an internal refrigerator component in accordance with the accompanying claims.

[0008] The invention also relates to a refrigerator provided with such an internal container, in accordance with the accompanying claims.

[0009] The present invention will be more apparent from the accompanying drawing, which is provided by way of non-limiting example and in which:

Figure 1 is a perspective view of a container according to the invention, in a first position of use;
 Figure 2 is a perspective view of the container of Figure 1, but in a different position of use;
 Figure 3 is a view from above showing the container of Figure 1 associated with an under-tray;
 Figure 4 is a section on the line 4-4 of Figure 3, but with the container in its use position of Figure 2; and
 Figure 5 is a perspective view of the under-tray of Figures 3 and 4.

[0010] With reference to said figures, an internal container for a refrigerator, for example an upright refrigerator, obtained in accordance with the invention, is indicated overall by 1 and is intended to be positioned within a preservation compartment of that refrigerator. The container 1 comprises a body 2 having a base 3 with an edge from which perimetral walls 4, 5, 6 and 7 upwardly extend to define a cell or internal cavity 8 of the container 1.

[0011] In the example, the body 2 is defined by a metal lattice structure, making the body extremely lightweight. However it could also be defined by a structure with walls of rigid material, for example plastic.

[0012] According to the invention, whatever the type of construction (or structure) of the body 2, that wall 7 or end wall (front or rear) to be disposed at the aperture or end wall of the compartment in which the component 1 is placed, is made movable relative to the adjacent walls 4 and 6 and is able to assume two working positions: a position perpendicular (or substantially perpendicular) to the base 3 of the component 1 (see for example Figure 1) and an inclined position (see for example Figure 2 and Figure 4). The first position is assumed by the wall 7 when the component 1 is to be used as a holder for containing foods to be placed in its cavity 8, such as fruit and vegetables. The second position, namely the inclined position, is assumed by the wall 7 when the component 1 is to be used to support at least one bottle 10. For this purpose, on that side 11 close to the base 3 of the body 2, the wall 7 presents at least one projecting portion 12 (two in the figures), to act as a lower support for the corresponding bottle 10, this latter thus resting on the inclined wall 7.

[0013] As shown in Figures 2 and 4, the wall 7 can be inclined towards the interior of the cavity 8 of the body 2. In this manner, when said wall is in that position, the bottle 10 lies substantially within said cavity, between the walls 4 and 6 adjacent to the wall 7. Preferably, the dimensions of the wall 7 and of the cavity 8 enable at least one 750 ml bottle to be supported.

[0014] The wall 7 stably assumes the two working positions by virtue of at least one hinge 15 positioned at that side 17 close to the wall 4. In the embodiment shown in the figures, the side 11 of the wall 7 extends such that a part or pin 20 projects from the side 11 to cooperate with a hook-shaped portion 21 rigid with the wall 4. The pin 20 engages the hook recess 22 so that it can rotate within it. The side 11 also cooperates with an arched recess 25 in a projection 26 from the base 3 which also acts as a hinge for the movement of the wall 7.

[0015] When inclined, this latter rests on pins 27 projecting from the walls 4 and 6 within the cavity 8.

[0016] The vertical position of the wall 7 is maintained by the engagement between a locking or hook portion 30 thereof and the base 3 of the body 2. More precisely, the locking or hook portion 30 is defined by an elongated hooking element 31 of the wall 7 which is bent towards the opposing wall 5 and presents a raised end 33. A recess 35 is present in a base of this latter to receive a

filiform part 36 of the base 3 when the wall 7 is in its first working position; the engagement between the recess 35 and said part 36 is of snap type as the end 33 of the elongated element 31 is elastically movable relative to the remaining portion 37 of this latter and tends to close said recess: on inserting the filiform part 36 into said recess the bent end 33 deforms, then when this part is within the recess said end presses on it to retain it engaged with the elongated hook element. This enables the wall 7 to remain in the position of Figure 1. When it is to be put into the position of Figure 2, simply pressing against said wall causes the filiform part 36 of the base 3 to separate from the recess 35 and the wall 7 can be inclined and rested on its pins 27.

[0017] To enable said wall to move, a space is provided below the base 3 of the container 1. This is achievable by support feet associated with this latter or, as in the figures, by allowing the ends 41 of those filiform elements 40 defining the base 3 to project at those edges close to the walls 4 and 6. These projecting ends 41 may be associated with only some of the elements 40 as in the example (as visible in Figure 4) or with all of them. The feet or projecting elements 41 can rest directly on a lower wall of the compartment in which the component 1 is positioned or can rest on a shaped tray 43, such as that visible in Figures 3-5, resting on said lower wall. The tray 43 presents recesses 45-47 of different shapes, one of which (the recess 45) receives the component 1. This recess can receive any liquids released by the foods placed in said component.

[0018] In order to better hold each bottle 10, the wall 7 can be suitably shaped and present in that face thereof external to the cavity 8 of the body 2 a corresponding recess defined mainly by an arch-shaped portion 51 of an edge 52 of said wall bent towards said cavity. The bottle 10 stably rests on said arch-shaped portion 51 when the wall 7 is inclined.

[0019] A preferred embodiment of the invention has been described. However on the basis of the foregoing description other embodiment can be obtained, all falling within the scope of the ensuing claims.

Claims

1. An internal refrigerator component (1) for containing and supporting foods and bottles (10), comprising a body (2) defined by a base (3), from the perimetral edge of which walls (4, 5, 6, 7) upwardly extend to define an internal cavity (8), **characterised in that** one (7) of said walls (4, 5, 6, 7) is movable relative to the adjacent walls (4, 6) and can be inclined to these latter within said cavity (8), said movable wall (7) comprising on a lower side (11) thereof at least one projecting portion (12) intended to act as a support for bottles (10) or the like when the wall (7) is in said inclined position.

2. A component as claimed in claim 1, **characterised in that** the projecting portion (12) extends from the lower side (11) of the movable wall (7) close to a base (3) of the cavity and is disposed on the outside of this latter.
3. A component as claimed in claim 1, **characterised in that** the movable wall (7) comprises a face, external to the component cavity, for supporting the bottle (10) when inclined, said face being shaped to enable and facilitate this support.
4. A component as claimed in claim 3, **characterised in that that** face supporting the bottle (10) presents a recess for this latter.
5. A component as claimed in claim 4, **characterised in that** the bottle recess is defined by a free edge (52) of the movable wall (7) having a portion (51) arched towards the interior of the cavity (8) of the component (1), said arched portion being positioned to correspond with the projecting portion (12) of that side (11) of the movable wall (7) opposing said free edge (52).
6. A component as claimed in claim 1, **characterised in that** those walls (4, 6) adjacent to the movable wall comprise support pins (27) projecting into the cavity (8) to support the movable wall (7) when inclined.
7. A component as claimed in claim 1, **characterised by** comprising hinges coupling the movable wall (7) to the adjacent walls (4, 6).
8. A component as claimed in claim 1, **characterised by** having a metal lattice structure.
9. A component as claimed in claims 7 and 8, **characterised in that** the lower side (11) of the movable wall (7) close to the base (3) of the component (1) has at least one pin (20) projecting towards an adjacent wall (4) to define with a hook-shaped portion (21) of said wall a hinge for the movement of the movable wall (7).
10. A component as claimed in claims 7 and 8, **characterised in that** the base (3) presents an arch-shaped projection (26) extending towards the movable wall (7) to receive, by passing into a recess (25) thereof, the lower side (11) of said wall, said side being able to rotate within said recess (25).
11. A component as claimed in claim 1, **characterised in that** the movable wall (7) and the base (3) present mutually cooperating members (30, 35) to maintain said wall in a raised position with respect to the component cavity (8).

12. A component as claimed in claim 11, **characterised in that** said members are an automatically separable hook portion (30) and a filiform part (35).
13. A component as claimed in claim 12, **characterised in that** the automatically separable hook portion (30) is associated with the movable wall and comprises an elongated hooking element (31) facing towards that wall (5) opposing the movable wall (7) and presenting a recess (35) for removably receiving a filiform part (36) connected to the base (3), said filiform part (36) automatically engaging said elongated element (31) when the wall (7) passes from the inclined position to the raised position to hence retain said movable wall (7) in this latter position.
14. A component as claimed in claim 13 **characterised in that** a tray (43) is provided on which said component (1) rests.
15. A refrigerator comprising at least one food preservation compartment and presenting a container or drawer having an internal cavity, **characterised in that** said compartment or drawer is formed as the refrigerator internal component (1) claimed in claim 1.

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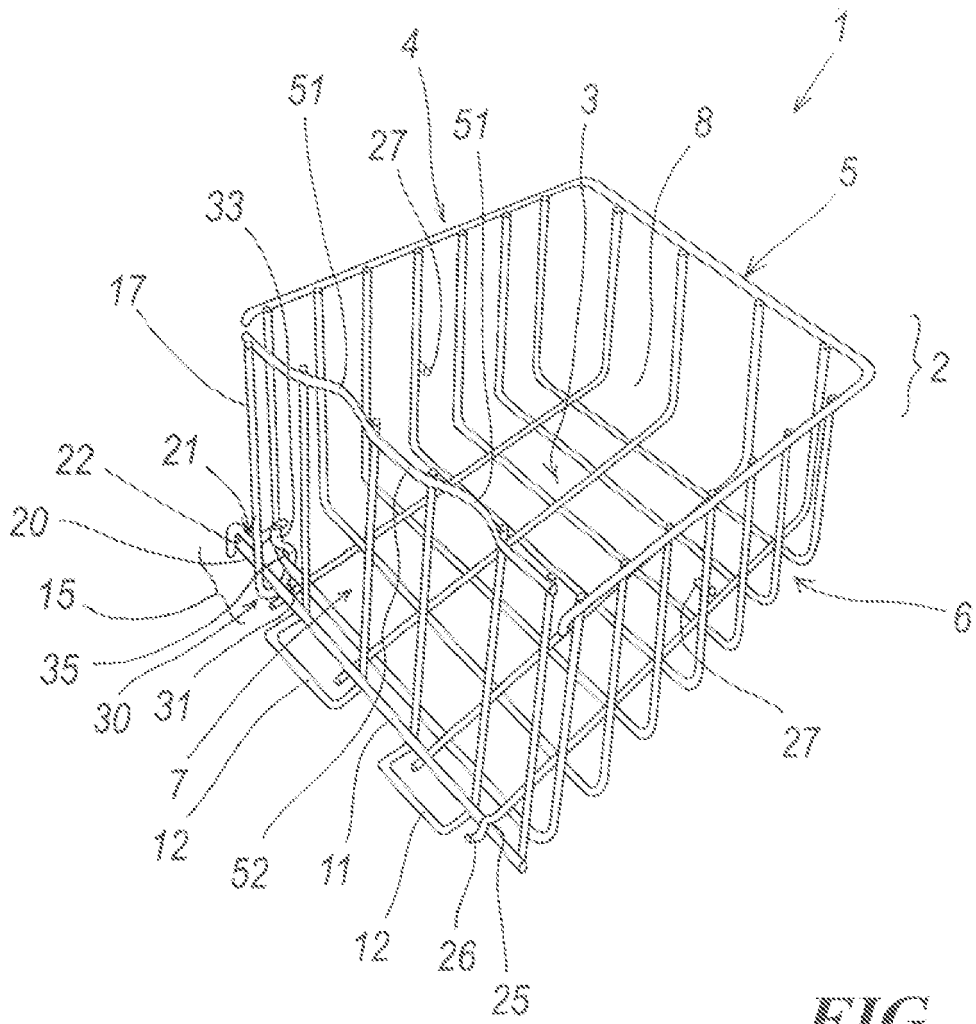


FIG. 1

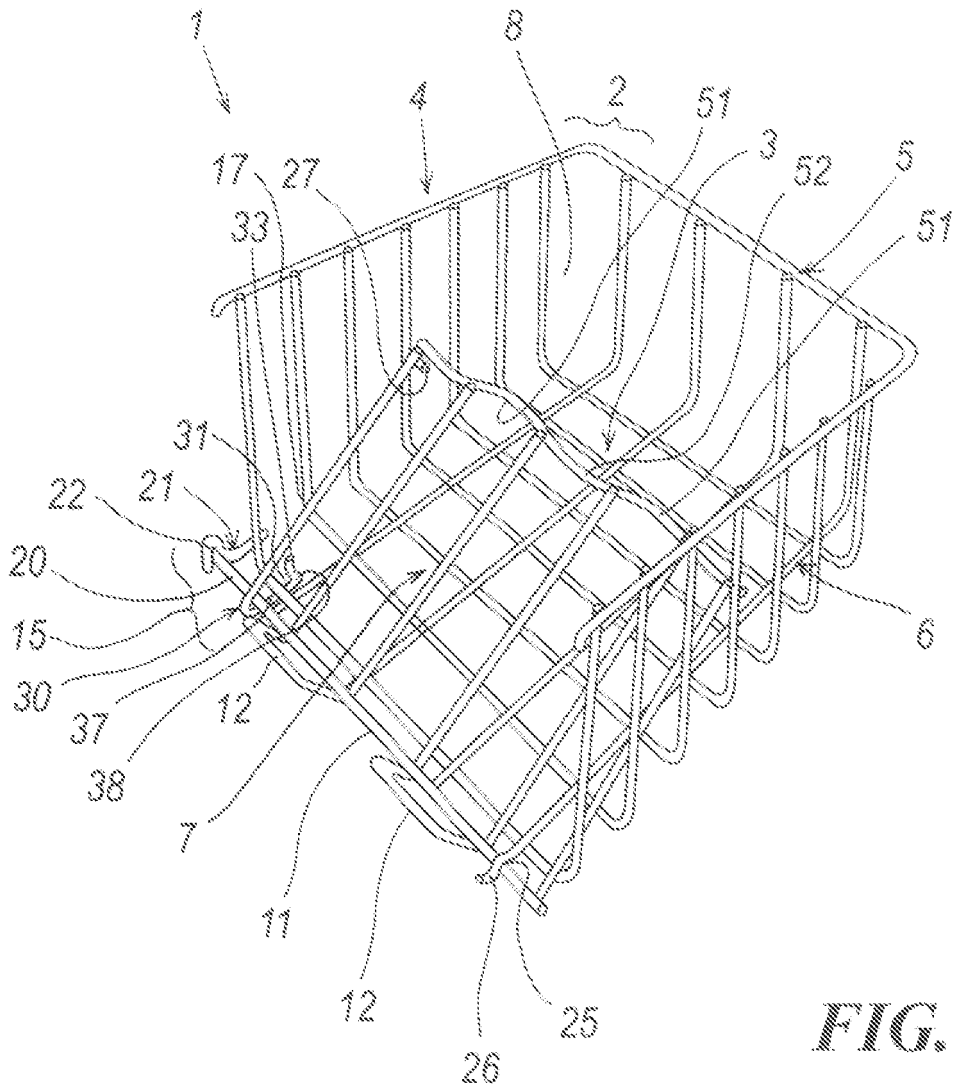


FIG. 2

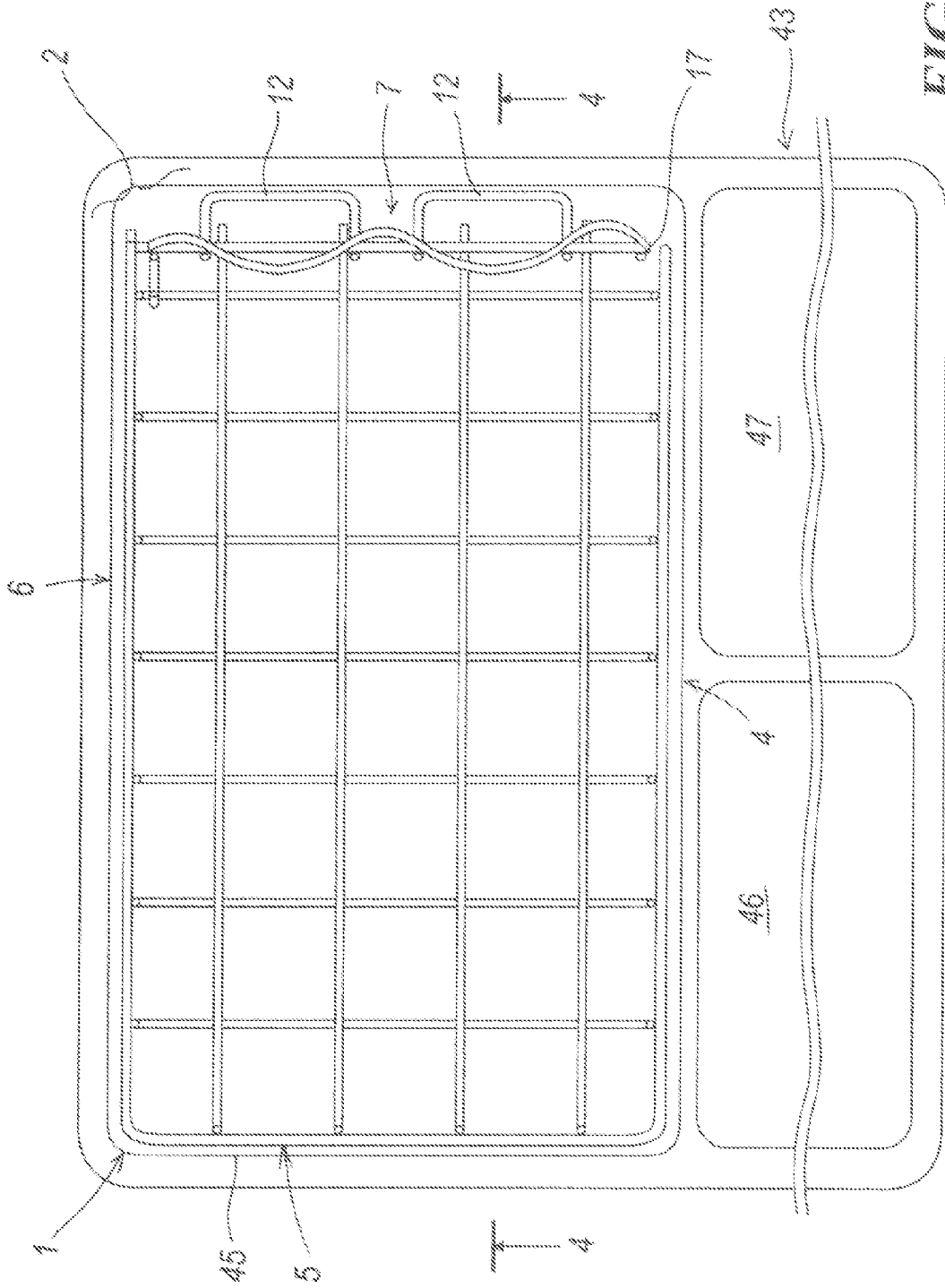


FIG. 3

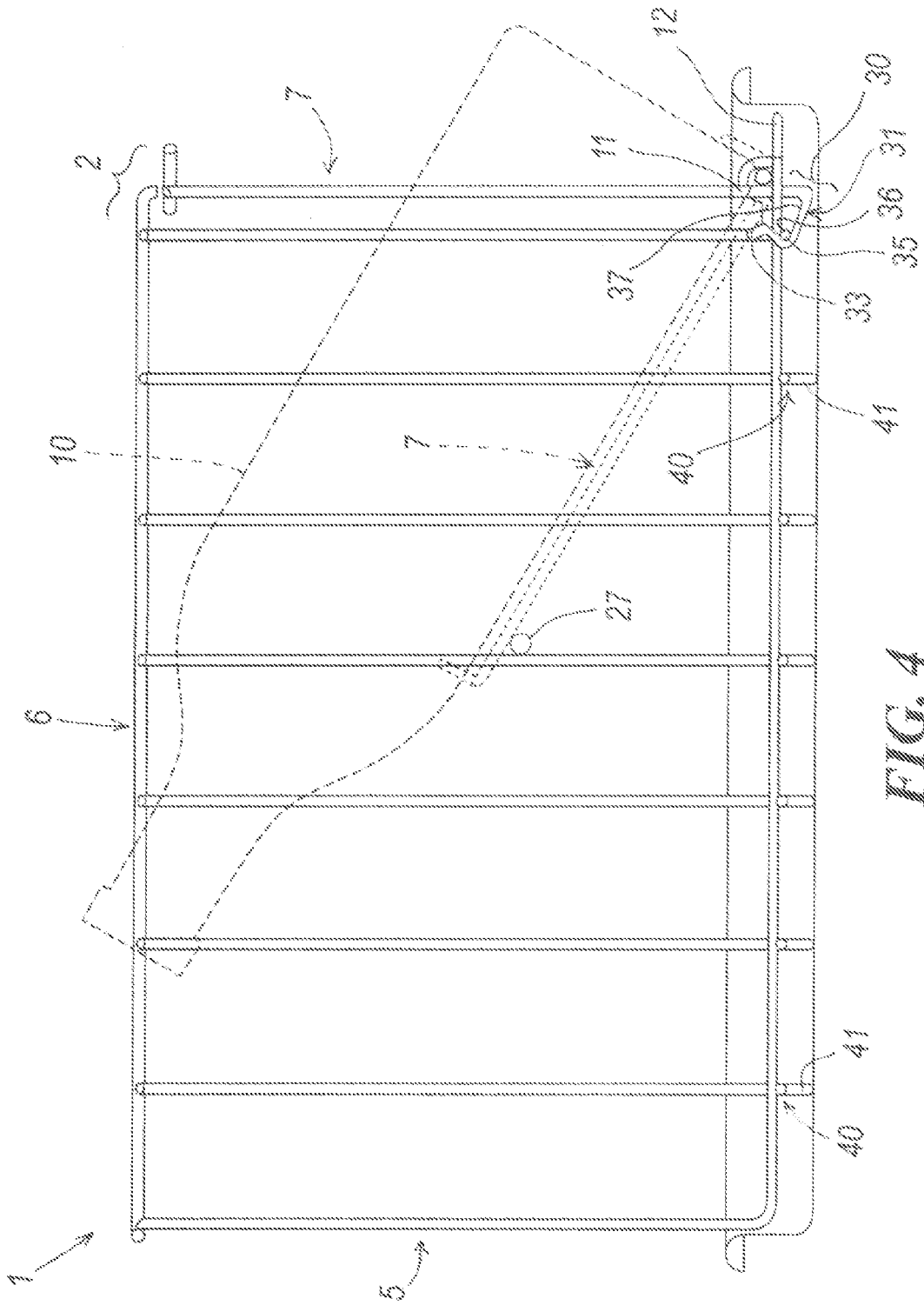


FIG. 4

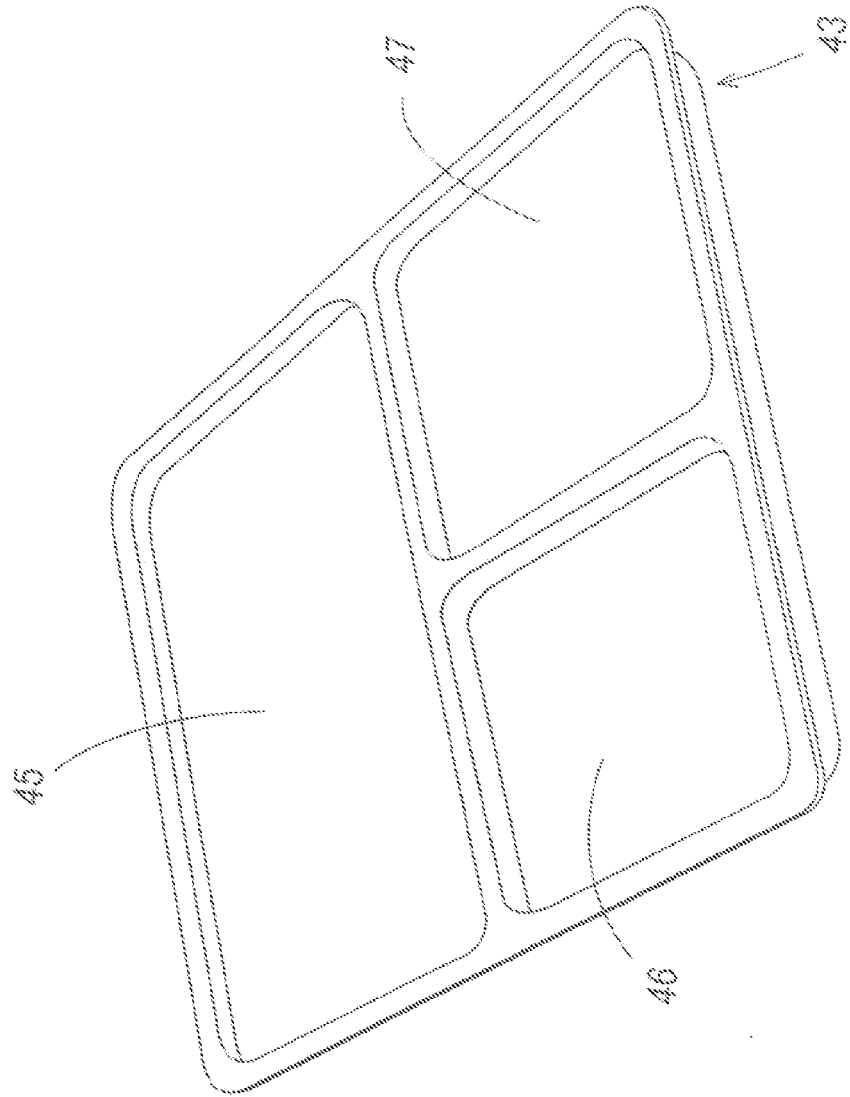


FIG. 5