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(54) **REFRIGERATED SALES FURNITURE**

GEKÜHLTES VERKAUFSMÖBELSTÜCK

MEUBLE COMMERCIAL RÉFRIGÉRÉ

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EP 3 585 216 B1

Description

[0001] The invention relates to refrigerated sales furniture and methods therefor.

[0002] Refrigerated sales furniture having at least one refrigerated sales space may be provided with doors, in particular transparent doors, for closing the refrigerated sales space. When closing the refrigerated sales space, such doors thermally isolate the refrigerated sales space from the environment, in particular reducing the exchange of cold air from the refrigerated sales space with warm ambient air. This minimizes the amount of energy needed for cooling the refrigerated sales space to a desired temperature and thus enhances the energetic efficiency of the refrigerated sales furniture.

[0003] DE102014004351 B3 discloses a refrigerated sales furniture having pivoting doors.

[0004] Such doors, however, obstruct the access to the refrigerated sales space. This may be inconvenient in situations in which full access to the refrigerated sales is desirable. These situations in particular may include "peak times", i.e. in times in which customers frequently access the refrigerated sales space for taking out products, "goods loading times", in which new products are loaded into the refrigerated sales space, "cleaning times", and "maintenance times".

[0005] Accordingly, it is an object of the present invention to provide refrigerated sales furniture combining the advantages of an energy saving configuration in which doors thermally isolate the refrigerated sales space from the environment, with the advantages of a "free access" configuration, in which the access to the refrigerated sales space is not obstructed by doors.

[0006] In this context, the technical problem cited previously is solved with the construction of the refrigerated sales furniture according to claim 1.

[0007] A further object of the invention is to include a method of providing full access to the refrigerated sales space of refrigerated sales furniture according to claim 1.

[0008] A further object of the invention is to include a method of changing the mode of access of the refrigerated sales space of refrigerated sales furniture according to claim 1.

[0009] A further object of the invention is to include a method of closing a refrigerated sales space of refrigerated sales furniture according to claim 1.

[0010] An example that is not part of the invention also include a method of accessing the refrigerated sales space by moving at least one door which is mounted to a respective door frame segment from its closed position, in which the door closes the respective part of the refrigerated sales space, into an open position allowing access to the respective part the refrigerated sales space.

[0011] The embodiments of the invention allow changing the mode of access to the refrigerated sales space of refrigerated sales furniture easily and conveniently by selectively moving the door frame segments between the planar arrangement and a folded arrangement.

[0012] In the planar arrangement, in which the door frame segments extend in the common plane with the front facing of the furniture body, the doors, which are supported by the door frame segments, thermally isolate the refrigerated sales space from the environment. This reduces the power consumption and enhances the efficiency of the refrigerated sales furniture, in particular when the need for access to the refrigerated sales space is low and the doors are opened only occasionally.

[0013] On the other hand, exemplary embodiments of the invention allow for an easy and unobstructed access to the refrigerated sales space when the door frame segments are moved into the folded position. Providing unobstructed access to the refrigerated sales space is beneficial in particular during "peak times", "goods loading times", "cleaning times", and "maintenance times", when the demand for accessing to the refrigerated sales space is high and the doors would be opened frequently.

[0014] Thus, exemplary embodiments of the invention provide the advantages of an energy saving configuration in which doors thermally isolate the refrigerated sales space from the environment as well as the advantages of a "free access" configuration in which the access to the refrigerated sales space is not obstructed by any doors.

[0015] A number of optional features are set out below. These features may be realized in particular embodiments, alone or in combination with any of the other features.

[0016] According to the invention, adjacent door frame segments are pivotally connected to each other. Particularly, two adjacent door frame segments are connected to each other by means of at least one hinge, which is mounted to the edges of adjacent door frame segments. Pivotally connecting adjacent door frame segments allows folding the door frame segments in an accordion type zig-zag-structure.

[0017] In one embodiment, the at least one door is pivotally mounted to a corresponding door frame segment. A pivoting door allows accessing the refrigerated sales space conveniently. Door frame segments each supporting a pivoting door may be folded easily.

[0018] In another embodiment, the at least two door frame segments can be moved into a folded arrangement in which they are arranged at a side of the furniture body. In case a plurality of furniture bodies is arranged next to each other, the door frame segments may be moved into a position between two adjacent furniture bodies. When arranged in this folded arrangement, the door frame segments allow for unobstructed access to the refrigerated sales space.

[0019] According to the invention, the door frame segments, when in the folded arrangement, extend substantially perpendicularly to the common plans. Arranging the door frame segments perpendicularly to the common plans minimizes the obstruction caused by the door frame segments.

[0020] In another embodiment, the door frame segments are guided between the planar arrangement and

a folded arrangement by means of at least one front guide rail, particularly by an upper front guide rail and/or a lower front guide rail. The at least one front guide rail in particular may extend along the front facing of the furniture body extending between the front portions of the left and right sides of the refrigerated sales furniture. Such front guide rails allow moving the door frame segments easily and safely between the planar arrangement and a folded arrangement. In particular, such front guide rails prevent any movement of the door frame segments in undesired directions, which could be dangerous for the operator.

[0021] In another embodiment, each door frame segment has a rectangular shape comprising a top side, a bottom side and two lateral sides extending between the top side and the bottom side, respectively. A first lateral side of each door frame segment is guided by the at least one front guide rail and an opposing second lateral side of each door frame segment is movable in a forward direction, i.e. away from the refrigerated sales space, with respect to the at least one front guide rail. This allows folding the door frame segments in an accordion type zig-zag-structure.

[0022] In another embodiment, each door frame segment comprises at least one support pin, particularly an upper support pin and/or a lower support pin. The at least one support pin is guided in a lateral direction by the at least one front guide rail. Support pins provide a reliable connection between the guiderail(s) and the door frame segments.

[0023] In another embodiment the at least one support pin is provided with a roller or castor, which is configured for rolling along the respective guiderail. Employing rollers or castors reduces the friction when the support pins move with respect to the front guide rail(s), and thus facilitates the moving of the door frame segments between the planar arrangement and a folded arrangement.

[0024] According to the invention, the two laterally adjacent door frame segments are arranged in pairs of door frame segments. Upper and/or lower support pins are arranged at upper / lower left portions of the left door frame segment and at upper / lower right portions of the right door frame segment of each pair of door frame segments, respectively. As a result, the right portion of the left door frame and the left portion of the right door frame fold in a forward direction when moving the pair of door frame segments from the planar to the folded arrangement. Such a configuration allows folding the door frame segments in the accordion type zig-zag-structure.

[0025] In another embodiment, one lateral side of at least one of the door frame segments is fixed to the furniture body, in particular to a pillar and/or to a side wall of the refrigerated sales furniture, preventing a lateral movement of the at least one of the door frame segment. Fixing one of the door frame segments to the furniture body allows for a convenient transition between the planar arrangement and a folded arrangement of the door frame segments.

[0026] In another embodiment, one of the door frame

segments, in particular a door frame segment which is arranged opposite to the door frame segment that is fixed to the furniture body, is lockable to the furniture body, in particular to a pillar and/or to a sidewall of the refrigerated sales furniture, in order to prevent any accidental or unauthorized movement of the door frame segments.

[0027] In another embodiment, the door frame segments are movable into a parking position when arranged in a folded arrangement. The door frame segments in particular are movable in a direction towards the rear wall of the refrigerated sales space, i.e. a direction which is perpendicular to the common plane. The refrigerated sales furniture in particular may be a refrigerated cabinet, in which the refrigerated sales space is accessible from the front, or a refrigerated chest, in which the refrigerated sales space is accessible from the top. In consequence, the common plane may be a vertical plane extending in front of the refrigerated sales space of a refrigerated cabinet, or a plane extending on top of the refrigerated sales space of a refrigerated chest. The common plane may extend horizontally or in an inclined orientation.

[0028] The door frame segments may be movable into a lateral position adjacent to one of the sides of the refrigerated sales space. The door frame segments in particular may be accommodated in a side portion of the refrigerated sales space or in a separate parking space which is provided next to the refrigerated sales space. A wall may separate said separate parking space from the refrigerated sales space. Moving the door frame segments into such a lateral position improves the access to the refrigerated sales space even further, as the door frame segments do not occupy any space in front of the refrigerated sales furniture.

[0029] In another embodiment, at least one of the door frame segments is guided by at least one guide rail extending perpendicularly to the upper and lower front guide rails in order to allow moving the door frame segments in a direction perpendicular to the common plane.

[0030] In another embodiment, at least one of the door frame segments is mounted to some kind of carriage, wherein the carriage is particularly movable in a direction which is oriented perpendicularly to the common plane. This facilitates the movement of the door frame segments and in particular avoids an undesired tilting and/or blocking of the door frame segments.

[0031] In another embodiment, the carriage is guided by at least one guide rail, extending perpendicularly to the front guide rails in order to allow moving the carriage in a direction which perpendicular to the common plane.

[0032] In another embodiment, the carriage is provided with at least one roller or castor in order to reduce the friction when moving the carriage.

[0033] In another embodiment, a method according to an exemplary embodiment of the invention includes moving the door frame segments into a parking position by moving the door frame segments in a direction perpendicular to the common plane. This movement reduces the space which is occupied by the door frame segments in

front of a refrigerated sales cabinet or above a refrigerates chest, and thus improves the access to the refrigerated sales space even further.

[0034] In the following, a refrigerated sales cabinet according to an exemplary embodiment of the invention is described in more detail with respect to the enclosed figures.

Figure 1 depicts a perspective view of a refrigerated sales cabinet according to an exemplary embodiment of the invention, wherein the door frame segments are arranged in a planar arrangement and the doors are arranged in their respective closed positions.

Figure 2 depict a horizontal sectional view through a front portion and the door segments of the refrigerated sales cabinet shown in Figure 1.

Figure 3 depicts a perspective view of a refrigerated sales cabinet according to an exemplary embodiment of the invention, wherein the door frame segments are arranged in a planar arrangement and the doors are arranged in an open position, respectively.

Figure 4 depicts a perspective view of a refrigerated sales cabinet according to an exemplary embodiment of the invention, wherein the door frame segments are arranged in a partially folded arrangement.

Figure 5 depict a horizontal sectional view through a front portion and the door segments of the refrigerated sales cabinet shown in Figure 4.

Figure 6 depicts a perspective view of a refrigerated sales cabinet according to an exemplary embodiment of the invention, wherein the door frame segments are arranged in a completely folded arrangement.

Figure 7 depict a horizontal sectional view through a front portion and the door segments of the refrigerated sales cabinet shown in Figure 6.

Figure 8 depicts a perspective view of a refrigerated sales cabinet according to an exemplary embodiment of the invention, wherein the door frame segments, which are arranged in a completely folded arrangement, are moved into a parking position.

Figure 9 shows a vertical sectional view through a door segment of a refrigerated sales cabinet according to an exemplary embodiment of the invention.

Figure 10 depicts an enlarged perspective view of the lower portions of a door frame segment in a completely folded arrangement.

Figure 11 depicts a detail enlargement of Figure 10.

[0035] Figures 1, 3, 4, 6, and 8 depict perspective views of a refrigerated sales cabinet (refrigerated sales furniture) 2 according to an exemplary embodiment of the invention. Figures 2, 5 and 7 depict a horizontal sectional view through a front portion of the refrigerated sales cabinet 2 shown in Figures 1, 4, and 6, respectively.

[0036] A refrigerated sales cabinet 2 according to an exemplary embodiment of the invention comprises a furniture body 3 having a base 16, a top portion 18 and a rear wall 4. The rear wall 4 extends vertically between the base 16 and the top portion 18 along the rear side of the furniture body 3. The furniture body 3 further may comprise a left side wall 5 (see Figs. 2, 4, and 5 to 8) and right side wall 7. The side walls 5, 7 are provided at the lateral ends of the furniture body 3 and extend vertically between the base 16 and the top portion 18 of the furniture body 3. In order to allow an unobstructed view into the refrigerated sales cabinet 2, the right side wall 7 is not shown in Figures 1, 3, 4, 6, and 8. In case a plurality of furniture bodies 3 are arranged next to each other, usually only the two outermost furniture bodies 3 are provided with a side wall 5, 7, respectively; and the sides of the furniture bodies 3 facing an adjacent furniture body 3 remain open.

[0037] The base 16, the top portion 18, the rear wall 4 and the side walls 5, 7 define a refrigerated sales space 10, which is open to the front. A plurality of horizontally extending shelves 14, which are configured to hold goods to be presented within refrigerated sales space 10, are provided in the refrigerated sales space 10.

[0038] Four door frame segments 12a, 12b are provided at the front of the refrigerated sales space 10. The door frame segments 12a, 12b, in combination, constitute a door frame framing the front portion of the refrigerated sales space 10.

[0039] Each of the door frame segments 12a, 12b supports a door 8, such that the door 8 is movable, in particular pivotable, between a closed position in which it closes the respective part of the refrigerated sales space 10 (see Figures 1 and 2), and an open position (see Figure 3) in which it allows access to the respective part of the refrigerated sales space 10.

[0040] When arranged in their respective closed positions, the doors 8 prevent cold air from flowing out of the refrigerated sales space 10 and warm ambient air from flowing into the refrigerated sales space 10. As a result, the energy needed for cooling the refrigerated sales space 10 to a desired temperature is reduced and the refrigerated sales cabinet 2 may be operated more efficiently.

[0041] However, since the doors 8 may be seen as an obstacle for customers wanting to access the refrigerated sales space, it may be desirable to provide full and unobstructed access to the refrigerated sales space, for example during "peak times", i.e. in times when customers frequently access the refrigerated sales space 10 for

taking out products.

[0042] According to the invention, the door frame segments 12a, 12b are movable between a planar arrangement, in which the door frame segments 12a, 12b extend in a common upright plane with the front facing of the furniture body 3 between the left and right sides or side walls 5, 7, and at least one folded arrangement, in which the segments extend substantially perpendicularly to said common plane. Examples of partially folded arrangements of the door frame segments 12a, 12b are shown in Figures 4 and 5, and Figures 6 to 8 depict completely folded arrangements of the door frame segments 12a, 12b.

[0043] In order to allow the door frame segments 12a, 12b to be moved between the planar arrangement and at least one folded arrangement, adjacent door frame segments 12a, 12b are pivotally connected with each other. Two adjacent door frame segments 12a, 12b in particular are connected with each other by at least one hinge 9. Each hinge 9 allows the adjacent door frame segments 12a, 12b to pivot with respect to each other around a vertical axis extending parallel to the rear wall 4 of the furniture body 3. Such a configuration allows folding the door frame segments 12a, 12b in an accordion type zig-zag-structure, as it is illustrated in Figures 4 and 5.

[0044] The door frame segments 12a, 12b are arranged in pairs of left and right door frame segments 12a, 12b, wherein a right portion of each left door frame segment 12a and a left portion of each right door frame segment 12b move in a forward direction, i.e. away from the refrigerated sales space 10, when the door frame segments 12a, 12b are moved from the planar arrangement (see Figures 1 and 2) into the folded arrangement (see Figures 4 and 5).

[0045] In the configuration shown in the figures, the rightmost door frame segment 12b which is located next to the right side or side wall 7 is fixated to the furniture body 3 so that it may pivot around a vertical axis but cannot move (shift) in the lateral direction.

[0046] At least one of the other door frame segments 12a, 12b, in particular the leftmost door frame segment 12a, may be lockable to the furniture body 3, in particular to the left sidewall 5 of the furniture body 3. The at least one lockable door frame segment 12a, 12b may be locked to the furniture body 3 when the door frame segments 12a, 12b are arranged in their planar arrangement in order to avoid that the door frame segments 12a, 12b move from the planar arrangement into a folded arrangement accidentally and/or without authorization.

[0047] A lock (not shown) for locking the at least one lockable door frame segment 12a, 12b may be located within at least one of the upper and lower front guide rails 20, 22.

[0048] In an alternative configuration which is not shown in the figures, the leftmost door frame segment 12a, which is arranged next to the left side or side wall 5, may be fixed to the furniture body 3, in particular to

the left side or side wall 5 of the furniture body 3, and the rightmost door frame segment 12b may be lockable to the furniture body 3, in particular to the right side or side wall 7 of the furniture body 3.

[0049] The skilled person will understand that not only one of door frame segments 12a, 12b may be lockable, but that a locking function may be provided for any of the door frame segments 12a, 12b.

[0050] The door frame segments 12a, 12b may be moved into a completely folded arrangement as illustrated in Figures 6 and 7. In the completely folded arrangement, the door frame segments 12a, 12b are arranged side by side parallel to each other at one side of the furniture body 3, particularly adjacent to one of the left and right sides or side walls 5, 7. According to the invention, the door frame segments extend substantially parallel to the sides or side walls 5, 7 and perpendicular to the common plane. When arranged in the completely folded configuration, the door frame segments 12a, 12b provide free access to the refrigerated sales space 10.

[0051] When moved between the planar arrangement and a folded arrangement, the door frame segments 12a, 12b are guided by an upper front guide rail 20 and a lower front guide rail 22. The upper front guide rail 20 is located at the top of the refrigerated sales space 10 below the top portion 18 of the furniture body 3 and extends horizontally between the left and right sides. The lower front guide rail 22 is located on top of the base portion 16 of the furniture body 3 at the bottom of the refrigerated sales space 10 and extends horizontally between the left and right sides.

[0052] The upper front guide rail 20 and the lower front guide rail 22 in particular may be mounted to the lower side of the top portion 18 and to the upper side of the base portion 16 of the furniture body 3, respectively.

[0053] In each pair of door frame segments 12a, 12b comprising a left door frame segment 12a and a right door frame segment 12b, the left portion of the left door frame segment 12a and the right portion of the right door frame segment 12b are guided by the front guide rails 20, 22, while the opposing sides of each door frame segments 12a, 12b are movable in a front direction as described before with reference to Figures 4 and 5.

[0054] Figure 9 shows a vertical sectional view through a front portion of the refrigerated sales furniture 2 including a door frame segment 12a along line A-A depicted in Figure 2.

[0055] Figure 9 in particular depicts a door frame segment 12a with a door 8 and the upper and lower front guide rails 20, 22 which are mounted to the base portion 16 and to the top portion 18 of the furniture body 3, respectively. The refrigerated sales space 10 is located on the left side of Figure 9.

[0056] The door frame segment 12a is guided by means of upper and lower rollers or castors 26, 28 along the front guide rails 20, 22 extending perpendicular to the plane of view of Figure 9. The rollers or castors 26, 28 are mounted to the door frame segment 12a by means

of an upper support pin 34 and a lower support pin 36, respectively.

[0057] The door 8 comprises a glass frame 32 supporting a glass pane 30, in particular a glass pane 30 made of thermally insulating glass or acrylic glass. The glass frame 32 is pivotally supported by upper and lower hinges 38, 40 mounted to the door frame segment 12a. The upper and lower hinges 38, 40 are configured to allow opening the door 8 by pivoting the glass frame 32 together with the glass pane 30 with respect to the door frame segment 12a as illustrated in Figure 3.

[0058] A combination of magnetic/metallic elements 33 may be attached to the glass frame 23 and to the door frame segment 12a in order to hold the door 8 in a closed position. In an alternative embodiment, special hinges may be employed for locking the doors 8 in their respective closed positions within the door frame segments 12a, 12b, 12c, 12d.

[0059] When the door frame segments 12a, 12b are arranged in the completely folded arrangement next to one of the sides of the furniture body 3 (see Figures 6 and 7), the door frame segments 12a, 12b may be moved into a parking position by moving the door frame segments 12a, 12b to the rear, i.e. in a direction towards the rear wall 4 of the furniture body 3. The door frame segments 12a, 12b in particular may be moved into a parking position within or next to the refrigerated sales space 10 in a direction perpendicular to the common plane.

[0060] A configuration in which the door frame segments 12a, 12b have been moved into a parking position is illustrated in Figure 8. Moving the door frame segments 12a, 12b into such a parking position, in particular in a position in which the door frame segments 12a, 12b are arranged within or laterally adjacent to the refrigerated sales space 10, avoids that the folded door frame segments 12a, 12b occupy space in front of the refrigerated sales cabinet 2 and obstruct the access to the refrigerated sales space 10.

[0061] Figure 10 depicts an enlarged perspective view of lower portions of the door frame segments 12a, 12b arranged in the completely folded arrangement next to the right side of the furniture body 3 (cf. Figure 8), and Figure 11 depicts a detail enlargement of Figure 10.

[0062] A plurality of rear guide rails 24 extend perpendicular to the upper and lower front guide rails 20, 22 in order to allow moving the door frame segments 12a, 12b in a direction perpendicular to the common plane.

[0063] The rear guide rails 24 are shown at the bottom of the refrigerated sales space 10 in Figures 10 and 11. They, however, may be provided at the bottom and/or at the top of the refrigerated sales space 10, as depicted in Figures 1, 3, 4, 6, and 8.

[0064] At least on of the door frame segments 12a, 12b, in particular the rightmost door frame segment 12b, may be supported by a carriage 42 which is guided by at least one of the rear guide rails 24. Employing a carriage 42 allows moving the door frame segments 12a, 12b smoothly. Using a carriage 42 in particular reduces

the risk that a door frame segment 12a, 12b tilts and locks, in particular when transferring from the lateral front guide rails 20, 22 to the rear guide rails 24 and vice versa.

[0065] In order to reduce the friction when moving the carriage 42 along the rear guide rails 24, the carriage 42 may be provided with at least one roller or castor 44.

[0066] Although four door frame segments 12a, 12b and doors 8 are shown in the figures, the skilled person will understand that exemplary embodiments of the invention are not restricted to respective configurations. Instead, the number of door frame segments 12a, 12b and doors 8 may be chosen arbitrarily according to the actual needs, in particular depending on the width of the refrigerated sales cabinet 2.

[0067] At least some components of a refrigeration circuit (not shown), in particular at least one evaporator, may be provided within the base 16 and/or the rear wall 4 of the furniture body 3 in order to cool the refrigerated sales space 10 to a desired temperature.

[0068] The refrigerated sales cabinet 2 may be a stand-alone refrigerated sales cabinet 2, comprising a complete refrigeration circuit including at least one compressor, at least one condenser, at least one expansion device and at least one evaporator. Alternatively, only at least one expansion device and at least one evaporator may be provided within the refrigerated sales cabinet 2, while the other components of the refrigeration circuit are located in another part of the building, in particular in a separate machine room. A condenser of the refrigeration circuit may be provided outside the building, e.g. on the roof of the building, in order to allow for an efficient transfer of heat to ambient air.

[0069] While the invention has been described with reference to exemplary embodiments, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements thereof without departing from the scope of the appended

References

[0070]

- | | |
|-----|---|
| 2 | refrigerated sales furniture / refrigerated sales cabinet |
| 3 | furniture body |
| 4 | rear wall |
| 5 | left side wall |
| 7 | right side wall |
| 8 | door |
| 10 | refrigerated sales space |
| 12a | left door frame segment |
| 12b | right door frame segment |
| 14 | shelf |
| 16 | base portion of the furniture body |
| 18 | top portion of the furniture body |
| 20 | upper front guide rail |
| 22 | lower front guide rail |
| 24 | rear guide rail |

26 upper roller / castor of a door frame segment
 28 lower roller / castor of a door frame segment
 30 glass pane
 32 glass frame
 33 magnetic/metallic element
 34 upper support pin
 36 lower support pin
 38 upper hinge
 40 lower hinge
 42 carriage
 44 roller / castor of the carriage

Claims

1. Refrigerated sales furniture (2) comprising:

a furniture body (3) providing a refrigerated sales space (10) for storing goods to be presented therein, wherein the refrigerated sales space, which is open to the front, (10) is defined by a base (16), a top portion (18), a rear wall (4) and two sides of the furniture body (3);

a plurality of door frame segments (12a, 12b), which are provided at a front of the refrigerated sales space (10);

wherein the plurality of door frame segments (12a, 12b) are movable between a planar arrangement in which the door frame segments (12a, 12b) extend in a common plane, and a folded arrangement in which the segments extend perpendicularly to said common plane and substantially parallel to the sides of the furniture body (3);

wherein at least one of the door frame segments (12a, 12b) supports at least one door (8), such that the at least one door (8) is movable between a closed position, in which it closes a respective part of the refrigerated sales space (10), and an open position, in which it allows accessing the respective part of the refrigerated sales space (10);

characterized in that adjacent door frame segments (12a, 12b) are pivotably connected to each other by means of at least one hinge (9) allowing the adjacent door frame segments (12a, 12b) to pivot with respect to each other around a vertical axis extending parallel to the rear wall (4) of the furniture body (3) for folding the door frame segments (12a, 12b) in an accordion type zig-zag-structure, and **in that** the door frame segments (12a, 12b) are arranged in pairs of at least two left and right door frame segments (12a, 12b), wherein a right portion of each left door frame segment (12a) and a left portion of each right door frame segment (12b) move in a forward direction away from the refrigerated sales space (10), when the door

frame segments (12a, 12b) are moved from the planar arrangement into the folded arrangement.

5 2. Refrigerated sales furniture (2) according to claim 1, wherein the plurality of door frame segments (12a, 12b) are movable into a folded arrangement in which they are arranged at a side portion of the furniture body (3), particularly adjacent to one of the left and right sides of the furniture body (3) to allow unobstructed access to the refrigerated sales space (10).
 10

3. Refrigerated sales furniture (2) according to any of the previous claims, wherein the door frame segments (12a, 12b) are guided between the planar arrangement and the folded arrangement by means of at least one front guide rail (20, 22) extending along the front facing of the furniture body (3), particularly by an upper front guide rail (20) and a lower front guide rail (22).
 15 20

4. Refrigerated sales furniture (2) according to claim 3, wherein each door frame segment (12a, 12b) comprises at least one support pin (34, 36), particularly an upper support pin (34) and a lower support pin (36), wherein the at least one support pin (34, 36) is guided in the lateral direction by the at least one front guide rail (20, 22), wherein at least one support pin (34, 36) in particular is provided with a roller or castor (26, 28), which is configured for rolling along the respective front guide rail (20, 22) in the lateral direction.
 25 30

5. Refrigerated sales furniture (2) according to claim 3 or 4, wherein a first side of each door frame segment (12a, 12b) is guided by the at least one front guide rail (20, 22) and an opposing second side of each door frame segment (12a, 12b) is movable away from the refrigerated sales space (10) with respect to the at least one front guide rail (20, 22).
 35 40

6. Refrigerated sales furniture (2) according to any of claims 3 to 5, wherein upper and lower support pins (34, 36) for guiding the respective door frame segment (12a, 12b) are arranged at upper and lower left portions of the left door frame segment (12a) and at upper and lower right portions of the right door frame segment (12b) of a pair of door frame segments (12a, 12b), respectively, such that the right portion of the left door frame segment (12a) and the left portion of the right door frame segment (12b) fold in a forward direction when moving the pair of door frame segments (12a, 12b) from the planar arrangement into a folded arrangement.
 45 50 55

7. Refrigerated sales furniture (2) according to any of the previous claims, wherein one side of at least one

of the door frame segments (12a, 12b) is fixed to the furniture body (3), in particular to a pillar or to a sidewall (5, 7) of the refrigerated sales furniture (2), and/or

wherein one side of at least one of the door frame segments (12a, 12b) is lockable to the furniture body (3), in particular to a pillar or to a sidewall (5, 7) of the refrigerated sales furniture (2).

8. Refrigerated sales furniture (2) according to any of the previous claims, wherein the door frame segments (12a, 12b), when arranged in a folded arrangement, are movable, in particular perpendicular to the common plane, wherein the door frame segments (12a, 12b) in particular are movable towards the rear wall (4) of the refrigerated sales space (10) into a parking position.

9. Refrigerated sales furniture (2) according to claim 8 further comprising rear guide rails (24) extending perpendicular to the upper and lower front guide rails (20, 22) in order to allow moving the door frame segments in a direction perpendicular to the common plane.

10. Refrigerated sales furniture (2) according to claim 8 or 9, wherein in the folded arrangement in which the door frame segments (12a, 12b) are movable towards a rear wall (4) of the refrigerated sales space (10), at least one of the door frame segments (12a, 12b) is supported on a carriage (42), and wherein the carriage (42) is movable in a direction perpendicular to the common plane.

11. Method of providing full access to a refrigerated sales space (10) of refrigerated sales furniture (2) according to any of claim 1 to 10, wherein the method comprises the step of: moving the plurality of frame segments (12a, 12b) from the planar arrangement in which the door frame segments (12a, 12b) extend in the common plane, into a folded arrangement in which the segments extend perpendicularly to said common plane and substantially parallel to the sides of the furniture body (3), wherein moving the plurality of door frame segments (12a, 12b) includes pivoting adjacent door frame segments (12a, 12b) with respect to each other around a vertical axis extending parallel to the rear wall (4) of the furniture body (3).

12. Method of claim 11, wherein the method further includes moving the door frame segments (12a, 12b) towards the rear wall (4) of the refrigerated sales space (10), in particular perpendicular to the common plane, into a parking position.

13. Method of changing the mode of access to the refrigerated sales space (10) of refrigerated sales fur-

niture (2) according to any of claims 1 to 10, wherein the method comprises the steps of:

moving the plurality of door frame segments (12a, 12b) from the folded arrangement in which the door frame segments (12a, 12b) extend perpendicularly to the common plane and substantially parallel to the sides of the furniture body (3) into the planar arrangement in which the door frame segments (12a, 12b) extend in said common plane, wherein moving the plurality of door frame segments (12a, 12b) includes pivoting adjacent door frame segments (12a, 12b) with respect to each other around a vertical axis extending parallel to the rear wall (4) of the furniture body (3); and

moving at least one door (8) supported by a respective door frame segment (12a, 12b) from a closed position in which the door (8) closes the respective part of the refrigerated sales space (10), into an open position in which the door (8) allows accessing the respective part of the refrigerated sales space (10).

14. Method of closing a refrigerated sales space (10) of refrigerated sales furniture (2) according to any of claims 1 to 10,

wherein the method comprises moving the plurality of door frame segments (12a, 12b) from the folded arrangement in which the door frame segments (12a, 12b) extend perpendicularly to the common plane and substantially parallel to the sides of the furniture body (3) into the planar arrangement in which the door frame segments (12a, 12b) extend in said common plane, wherein moving the plurality of door frame segments (12a, 12b) includes pivoting adjacent door frame segments (12a, 12b) with respect to each other around a vertical axis extending parallel to the rear wall (4) of the furniture body (3).

Patentansprüche

1. Gekühltes Verkaufsmöbel (2), umfassend:

einen Möbelkorpus (3), der einen gekühlten Verkaufsraum (10) zum Aufbewahren von darin zu präsentierenden Waren bereitstellt, wobei der gekühlte Verkaufsraum, der nach vorne offen ist, (10) durch einen Sockel (16), einen oberen Abschnitt (18), eine Rückwand (4) und zwei Seiten des Möbelkorpus (3) begrenzt ist; eine Vielzahl von Türrahmensegmenten (12a, 12b), die an einer Vorderseite des gekühlten Verkaufsraums (10) bereitgestellt ist; wobei die Vielzahl von Türrahmensegmenten (12a, 12b) zwischen einer ebenen Anordnung, in der sich die Türrahmensegmente (12a, 12b)

in einer gemeinsamen Ebene erstrecken, und einer gefalteten Anordnung bewegbar ist, in der sich die Segmente senkrecht zu der gemeinsamen Ebene und im Wesentlichen parallel zu den Seiten des Möbelkorpus (3) erstrecken; wobei mindestens eines der Türrahmensegmente (12a, 12b) mindestens eine Tür (8) trägt, sodass die mindestens eine Tür (8) zwischen einer geschlossenen Position, in der sie einen jeweiligen Teil des gekühlten Verkaufsraums (10) schließt, und einer offenen Position, in der sie den Zugang zu dem jeweiligen Teil des gekühlten Verkaufsraums (10) ermöglicht, bewegbar ist;

dadurch gekennzeichnet, dass benachbarte Türrahmensegmente (12a, 12b) mittels mindestens eines Scharniers (9) schwenkbar miteinander verbunden sind, wodurch ermöglicht wird, dass die benachbarten Türrahmensegmente (12a, 12b) in Bezug aufeinander um eine vertikale Achse schwenken, die sich zum Falten der Türrahmensegmente (12a, 12b) in einer Zick-Zack-Struktur nach Art einer Ziehharmonika parallel zu der Rückwand (4) des Möbelkorpus (3) erstreckt, und dadurch, dass die Türrahmensegmente (12a, 12b) in Paaren von mindestens zwei linken und rechten Türrahmensegmenten (12a, 12b) angeordnet sind, wobei sich ein rechter Abschnitt von jedem linken Türrahmensegment (12a) und ein linker Abschnitt von jedem rechten Türrahmensegment (12b) in einer Vorwärtsrichtung von dem gekühlten Verkaufsraum (10) weg bewegen, wenn die Türrahmensegmente (12a, 12b) von der ebenen Anordnung in die gefaltete Anordnung bewegt werden.

2. Gekühltes Verkaufsmöbel (2) nach Anspruch 1, wobei die Vielzahl von Türrahmensegmenten (12a, 12b) in eine gefaltete Anordnung bewegbar ist, in der sie an einem Seitenabschnitt des Möbelkorpus (3) angeordnet ist, insbesondere benachbart zu einer von der rechten und linken Seite des Möbelkorpus (3), um einen ungehinderten Zugang zu dem gekühlten Verkaufsraum (10) zu ermöglichen.
3. Gekühltes Verkaufsmöbel (2) nach einem der vorhergehenden Ansprüche, wobei die Türrahmensegmente (12a, 12b) mithilfe mindestens einer vorderen Führungsschiene (20, 22), die sich entlang der Frontverkleidung des Möbelkorpus (3) erstreckt, insbesondere durch eine obere vordere Führungsschiene (20) und eine untere vordere Führungsschiene (22), zwischen der ebenen Anordnung und der gefalteten Anordnung geführt werden.
4. Gekühltes Verkaufsmöbel (2) nach Anspruch 3, wobei jedes Türrahmensegment (12a, 12b) mindes-

tens einen Trägerstift (34, 36) umfasst, insbesondere einen oberen Trägerstift (34) und einen unteren Trägerstift (34), wobei der mindestens eine Trägerstift (34, 36) durch die mindestens eine vordere Führungsschiene (20, 22) in der Querrichtung geführt wird, wobei insbesondere mindestens ein Trägerstift (34, 36) mit einer Rolle oder Lenkrolle (26, 28) bereitgestellt ist, die dazu konfiguriert ist, entlang der jeweiligen vorderen Führungsschiene (20, 22) in der Querrichtung zu rollen.

5. Gekühltes Verkaufsmöbel (2) nach Anspruch 3 oder 4, wobei eine erste Seite jedes Türrahmensegments (12a, 12b) durch die mindestens eine vordere Führungsschiene (20, 22) geführt wird und eine gegenüberliegende zweite Seite jedes Türrahmensegments (12a, 12b) in Bezug auf die mindestens eine vordere Führungsschiene (20, 22) von dem gekühlten Verkaufsraum (10) weg bewegbar ist.
6. Gekühltes Verkaufsmöbel (2) nach einem der Ansprüche 3 bis 5, wobei ein oberer und ein unterer Trägerstift (34, 36) zum Führen des jeweiligen Türrahmensegments (12a, 12b) an einem oberen und an einem unteren linken Abschnitt des linken Türrahmensegments (12a) und an einem oberen und an einem unteren rechten Abschnitt des rechten Türrahmensegments (12b) eines Paares von Türrahmensegmenten (12a, 12b) angeordnet sind, sodass der rechte Abschnitt des linken Türrahmensegments (12a) und der linke Abschnitt des rechten Türrahmensegments (12b) jeweils in eine Vorwärtsrichtung gefaltet werden, wenn das Paar von Türrahmensegmenten (12a, 12b) aus der ebenen Anordnung in eine gefaltete Anordnung bewegt wird.
7. Gekühltes Verkaufsmöbel (2) nach einem der vorhergehenden Ansprüche, wobei eine Seite von mindestens einem der Türrahmensegmente (12a, 12b) an dem Möbelkorpus (3), insbesondere an einer Säule oder an einer Seitenwand (5, 7) des gekühlten Verkaufsmöbels (2), befestigt ist und/oder wobei eine Seite von mindestens einem der Türrahmensegmente (12a, 12b) an dem Möbelkorpus (3), insbesondere an einer Säule oder an einer Seitenwand (5, 7) des gekühlten Verkaufsmöbels (2) verriegelbar ist.
8. Gekühltes Verkaufsmöbel (2) nach einem der vorhergehenden Ansprüche, wobei die Türrahmensegmente (12a, 12b), wenn sie in einer gefalteten Anordnung angeordnet sind, bewegbar sind, insbesondere senkrecht zu der gemeinsamen Ebene, wobei die Türrahmensegmente (12a, 12b) insbesondere in Richtung der Rückwand (4) des gekühlten Verkaufsraums (10) in eine Parkposition bewegbar sind.

9. Gekühltes Verkaufsmöbel (2) nach Anspruch 8, ferner umfassend hintere Führungsschienen (24), die sich senkrecht zu der oberen und unteren vorderen Führungsschiene (20, 22) erstrecken, um ein Bewe-
gen der Türrahmensegmente in einer Richtung senkrecht zu der gemeinsamen Ebene zu ermöglichen. 5
10. Gekühltes Verkaufsmöbel (2) nach Anspruch 8 oder 9, wobei in der gefalteten Anordnung, in der die Tür-
rahmensegmente (12a, 12b) in Richtung einer Rück- wand (4) des gekühlten Verkaufsraums (10) beweg-
bar sind, mindestens eines der Türrahmensegmente (12a, 12b) auf einem Schlitten (42) getragen wird und wobei der Schlitten (42) in einer Richtung senk-
recht zu der gemeinsamen Ebene bewegbar ist. 10
11. Verfahren zum Bereitstellen eines vollständigen Zu-
gangs zu einem gekühlten Verkaufsraum (10) mit einem gekühlten Verkaufsmöbel (2) nach einem der Ansprüche 1 bis 10,
wobei das Verfahren den folgenden Schritt umfasst: Bewegen der Vielzahl von Rahmensegmenten (12a, 12b) aus der ebenen Anordnung, in der sich die Tür-
rahmensegmente (12a, 12b) in der gemeinsamen Ebene erstrecken, in eine gefaltete Anordnung, in der sich die Segmente senkrecht zu der gemeinsa-
men Ebene und im Wesentlichen parallel zu den Sei- ten des Möbelkorpus (3) erstrecken, wobei das Be-
wegen der Vielzahl von Türrahmensegmenten (12a, 12b) Schwenken benachbarter Türrahmensegmen-
te (12a, 12b) in Bezug aufeinander um eine vertikale Achse beinhaltet, die sich parallel zu der Rückwand (4) des Möbelkorpus (3) erstreckt. 20 25 30
12. Verfahren nach Anspruch 11, wobei das Verfahren ferner Bewegen der Türrahmensegmente (12a, 12b) in Richtung der Rückwand (4) des gekühlten Ver-
kaufsraums (10), insbesondere senkrecht zu der ge- meinsamen Ebene, in eine Parkposition beinhaltet. 35 40
13. Verfahren zum Ändern der Zugangsart zu dem ge-
kühlten Verkaufsraum (10) des gekühlten Verkaufs- möbels (2) nach einem der Ansprüche 1 bis 10,
wobei das Verfahren die folgenden Schritte umfasst: 45
- Bewegen der Vielzahl von Türrahmensegmen-
ten (12a, 12b) aus der gefalteten Anordnung, in der sich die Türrahmensegmente (12a, 12b) senkrecht zu der gemeinsamen Ebene und im
Wesentlichen parallel zu den Seiten des Möbel- korpus (3) erstrecken, in die ebene Anordnung, in der sich die Türrahmensegmente (12a, 12b) in der gemeinsamen Ebene erstrecken, wobei
das Bewegen der Vielzahl von Türrahmenseg- menten (12a, 12b) Schwenken benachbarter
Türrahmensegmente (12a, 12b) in Bezug auf- einander um eine vertikale Achse beinhaltet, die 50 55

sich parallel zu der Rückwand (4) des Möbel-
korpus (3) erstreckt; und
Bewegen mindestens einer Tür (8), die von ei-
nem jeweiligen Türrahmensegment (12a, 12b)
getragen wird, aus einer geschlossenen Positi-
on, in der die Tür (8) den jeweiligen Teil des
gekühlten Verkaufsraums (10) verschließt, in ei-
ne offene Position, in der die Tür (8) den Zugang
zu dem jeweiligen Teil des gekühlten Verkaufs-
raums (10) ermöglicht.

14. Verfahren zum Schließen eines gekühlten Verkaufs-
raums (10) des gekühlten Verkaufsmöbels (2) nach
einem der Ansprüche 1 bis 10,
wobei das Verfahren das Bewegen der Vielzahl von
Türrahmensegmenten (12a, 12b) aus der gefalteten
Anordnung, in der sich die Türrahmensegmente
(12a, 12b) senkrecht zu der gemeinsame Ebene und
im Wesentlichen parallel zu den Seiten des Möbel-
korpus (3) erstrecken, in die ebene Anordnung, in
der sich die Türrahmensegmente (12a, 12b) in der
gemeinsamen Ebene erstrecken, umfasst, wobei
das Bewegen der Vielzahl von Türrahmensegmen-
ten (12a, 12b) Schwenken benachbarter Türrah-
mensegmente (12a, 12b) in Bezug aufeinander um
eine vertikale Achse beinhaltet, die sich parallel zu
der Rückwand (4) des Möbelkorpus (3) erstreckt.

Revendications

1. Meuble commercial réfrigéré (2) comprenant :

un corps de meuble (3) fournissant un espace
commercial réfrigéré (10) pour le stockage de
marchandises à y présenter, dans lequel l'es-
pace commercial réfrigéré, qui est ouvert vers
l'avant, (10) est défini par une base (16), une
partie supérieure (18), une paroi arrière (4) et
deux côtés du corps de meuble (3) ;
une pluralité de segments de cadre de porte
(12a, 12b), qui sont prévus à l'avant de l'espace
commercial réfrigéré (10) ;
dans lequel la pluralité de segments de cadre
de porte (12a, 12b) sont mobiles entre un agen-
cement plat dans lequel les segments de cadre
de porte (12a, 12b) s'étendent dans un plan
commun, et un agencement plié dans lequel les
segments s'étendent perpendiculairement audit
plan commun et sensiblement parallèle aux cô-
tés du corps de meuble (3) ;
dans lequel au moins l'un des segments de ca-
dre de porte (12a, 12b) supporte au moins une
porte (8), de telle sorte que l'au moins une porte
(8) est mobile entre une position fermée, dans
laquelle elle ferme une partie respective de l'es-
pace commercial réfrigéré (10), et une position
ouverte, dans laquelle elle permet d'accéder à

la partie respective de l'espace commercial réfrigéré (10) ;

caractérisé en ce que des segments de cadre de porte adjacents (12a, 12b) sont reliés de manière pivotante les uns aux autres au moyen d'au moins une charnière (9) permettant aux segments de cadre de porte adjacents (12a, 12b) de pivoter l'un par rapport à l'autre autour d'un axe vertical s'étendant parallèlement à la paroi arrière (4) du corps de meuble (3) pour plier les segments de cadre de porte (12a, 12b) selon une structure en zigzag de type accordéon, et **en ce que**

les segments de cadre de porte (12a, 12b) sont agencés par paires d'au moins deux segments de cadre de porte gauche et droit (12a, 12b), dans lequel une partie droite de chaque segment de cadre de porte gauche (12a) et une partie gauche de chaque segment de cadre de porte droit (12b) se déplace vers l'avant en s'éloignant de l'espace commercial réfrigéré (10), lorsque les segments de cadre de porte (12a, 12b) sont déplacés de l'agencement plat dans l'agencement plié.

2. Meuble commercial réfrigéré (2) selon la revendication 1, dans lequel la pluralité de segments de cadre de porte (12a, 12b) sont mobiles dans un agencement plié dans lequel ils sont disposés sur une partie latérale du corps de meuble (3), en particulier adjacentes à l'un des côtés gauche et droit du corps de meuble (3) pour permettre un accès libre à l'espace commercial réfrigéré (10).
3. Meuble commercial réfrigéré (2) selon l'une quelconque des revendications précédentes, dans lequel les segments de cadre de porte (12a, 12b) sont guidés entre l'agencement plat et l'agencement plié au moyen d'au moins un rail de guidage avant (20, 22) s'étendant le long du parement avant du corps de meuble (3), en particulier par un rail de guidage avant supérieur (20) et un rail de guidage avant inférieur (22).
4. Meuble commercial réfrigéré (2) selon la revendication 3, dans lequel chaque segment de cadre de porte (12a, 12b) comprend au moins un axe de support (34, 36), en particulier un axe de support supérieur (34) et un axe de support inférieur (34), dans lequel l'au moins un axe de support (34, 36) est guidé dans la direction latérale par l'au moins un rail de guidage avant (20, 22), dans lequel au moins un axe de support (34, 36) est en particulier pourvu d'un rouleau ou d'une roulette (26, 28), qui est configuré pour rouler le long du rail de guidage avant respectif (20, 22) dans la direction latérale.
5. Meuble commercial réfrigéré (2) selon la revendica-

tion 3 ou 4, dans lequel un premier côté de chaque segment de cadre de porte (12a, 12b) est guidé par l'au moins un rail de guidage avant (20, 22) et un second côté opposé de chaque segment de cadre de porte (12a, 12b) est mobile à l'opposé de l'espace commercial réfrigéré (10) par rapport à l'au moins un rail de guidage avant (20, 22).

6. Meuble commercial réfrigéré (2) selon l'une quelconque des revendications 3 à 5, dans lequel des axes de support supérieure et inférieure (34, 36) pour guider le segment de cadre de porte respectif (12a, 12b) sont agencés au niveau des parties gauche supérieure et inférieure du segment de cadre de porte gauche (12a) et aux parties droites supérieure et inférieure du segment de cadre de porte droit (12b) d'une paire de segments de cadre de porte (12a, 12b), respectivement, de sorte que la partie droite du segment de cadre de porte gauche (12a) et la partie gauche du segment de cadre de porte droit (12b) se replient dans une direction vers l'avant lors du déplacement de la paire de segments de cadre de porte (12a, 12b) de l'agencement plat dans un agencement plié.
7. Meuble commercial réfrigéré (2) selon l'une quelconque des revendications précédentes, dans lequel un côté d'au moins un des segments de cadre de porte (12a, 12b) est fixé au corps de meuble (3), en particulier à un pilier ou à une paroi latérale (5, 7) du meuble commercial réfrigéré (2), et/ou dans lequel un côté d'au moins un des segments de cadre de porte (12a, 12b) est verrouillable sur le corps de meuble (3), en particulier sur un pilier ou sur une paroi latérale (5, 7) du meuble commercial réfrigéré (2).
8. Meuble commercial réfrigéré (2) selon l'une quelconque des revendications précédentes, dans lequel les segments de cadre de porte (12a, 12b), lorsqu'ils sont disposés selon un agencement plié, sont mobiles, en particulier perpendiculairement au plan commun, dans lequel les segments de cadre de porte (12a, 12b) sont en particulier mobiles vers la paroi arrière (4) de l'espace commercial réfrigéré (10) dans une position de stationnement.
9. Meuble commercial réfrigéré (2) selon la revendication 8, comprenant en outre des rails de guidage arrière (24) s'étendant perpendiculairement aux rails de guidage avant supérieur et inférieur (20, 22) afin de permettre le déplacement des segments de cadre de porte dans une direction perpendiculaire au plan commun.
10. Meuble commercial réfrigéré (2) selon la revendication 8 ou 9, dans lequel dans l'agencement plié dans lequel les segments de cadre de porte (12a, 12b)

sont mobiles vers une paroi arrière (4) de l'espace commercial réfrigéré (10), au moins un des segments de cadre de porte (12a, 12b) est supporté sur un chariot (42), et dans lequel le chariot (42) est mobile dans une direction perpendiculaire au plan commun.

11. Procédé d'accès complet à un espace commercial réfrigéré (10) de meuble commercial réfrigéré (2) selon l'une quelconque des revendications 1 à 10, dans lequel le procédé comprend l'étape de :
 déplacement de la pluralité de segments de cadre (12a, 12b) de l'agencement plat dans lequel les segments de cadre de porte (12a, 12b) s'étendent dans le plan commun, dans un agencement plié dans lequel les segments s'étendent perpendiculairement audit plan commun et sensiblement parallèlement aux côtés du corps de meuble (3), dans lequel le déplacement de la pluralité de segments de cadre de porte (12a, 12b) comporte le pivotement de segments de cadre de porte adjacents (12a, 12b) les uns par rapport aux autres autour d'un axe vertical s'étendant parallèlement à la paroi arrière (4) du corps de meuble (3).
 12. Procédé selon la revendication 11, dans lequel le procédé comporte en outre le déplacement des segments de cadre de porte (12a, 12b) vers la paroi arrière (4) de l'espace commercial réfrigéré (10), en particulier perpendiculairement au plan commun, dans une position de stationnement.
 13. Procédé de changement de mode d'accès à l'espace commercial réfrigéré (10) d'un meuble commercial réfrigéré (2) selon l'une quelconque des revendications 1 à 10, dans lequel le procédé comprend les étapes de :
 déplacement de la pluralité de segments de cadre de porte (12a, 12b) de l'agencement plié dans lequel les segments de cadre de porte (12a, 12b) s'étendent perpendiculairement au plan commun et sensiblement parallèlement aux côtés du corps de meuble (3) dans l'agencement plat dans lequel les segments de cadre de porte (12a, 12b) s'étendent dans ledit plan commun, dans lequel le déplacement de la pluralité de segments de cadre de porte (12a, 12b) comporte le pivotement de segments de cadre de porte adjacents (12a, 12b) les uns par rapport aux autres autour d'un axe vertical s'étendant parallèlement à la paroi arrière (4) du corps de meuble (3) ; et
 déplacement d'au moins une porte (8) supportée par un segment de cadre de porte respectif (12a, 12b) d'une position fermée dans laquelle la porte (8) ferme la partie respective de l'espace commercial réfrigéré (10), à une position ouver-

te dans laquelle la porte (8) permet d'accéder à la partie respective de l'espace commercial réfrigéré (10).

14. Procédé de fermeture d'un espace commercial réfrigéré (10) de meuble commercial réfrigéré (2) selon l'une quelconque des revendications 1 à 10, dans lequel le procédé comprend le déplacement de la pluralité de segments de cadre de porte (12a, 12b) de l'agencement plié dans lequel les segments de cadre de porte (12a, 12b) s'étendent perpendiculairement au plan commun et sensiblement parallèlement aux côtés du corps de meuble (3) dans l'agencement plat dans lequel les segments de cadre de porte (12a, 12b) s'étendent dans ledit plan commun, dans lequel le déplacement de la pluralité de segments de cadre de porte (12a, 12b) comporte le pivotement de segments de cadre de porte adjacents (12a, 12b) les uns par rapport aux autres autour d'un axe vertical s'étendant parallèlement à la paroi arrière (4) du corps de meuble (3).

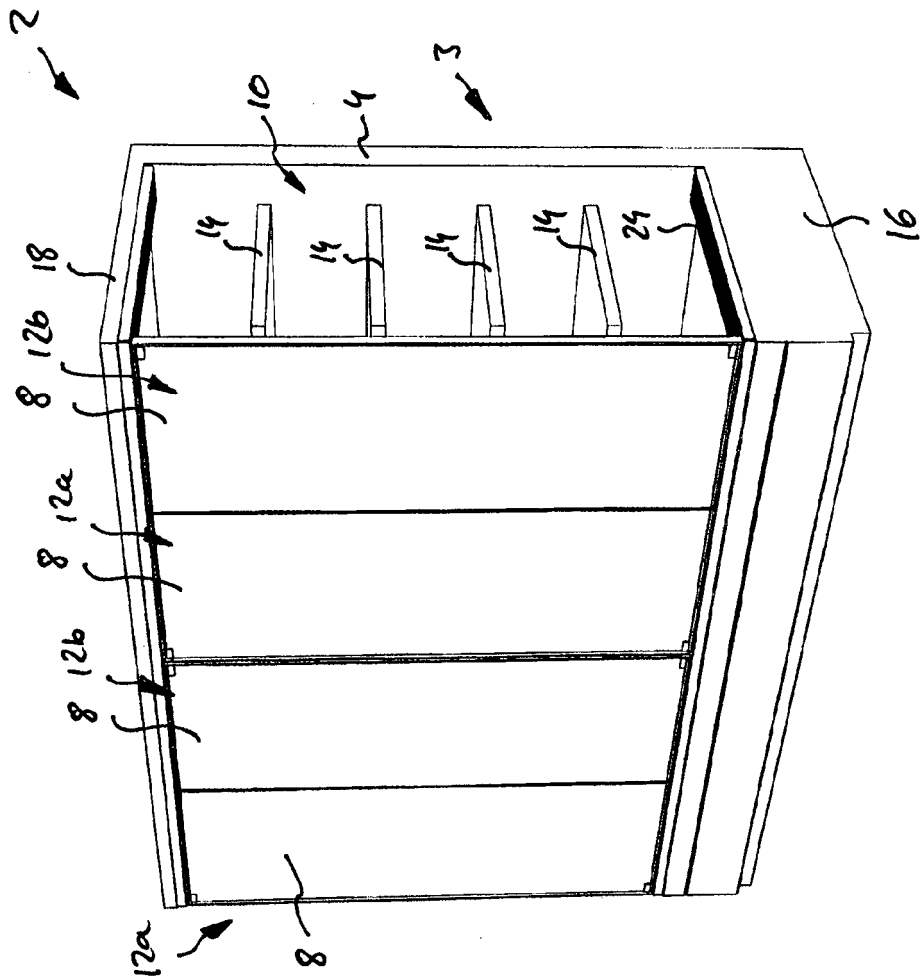


Fig. 1

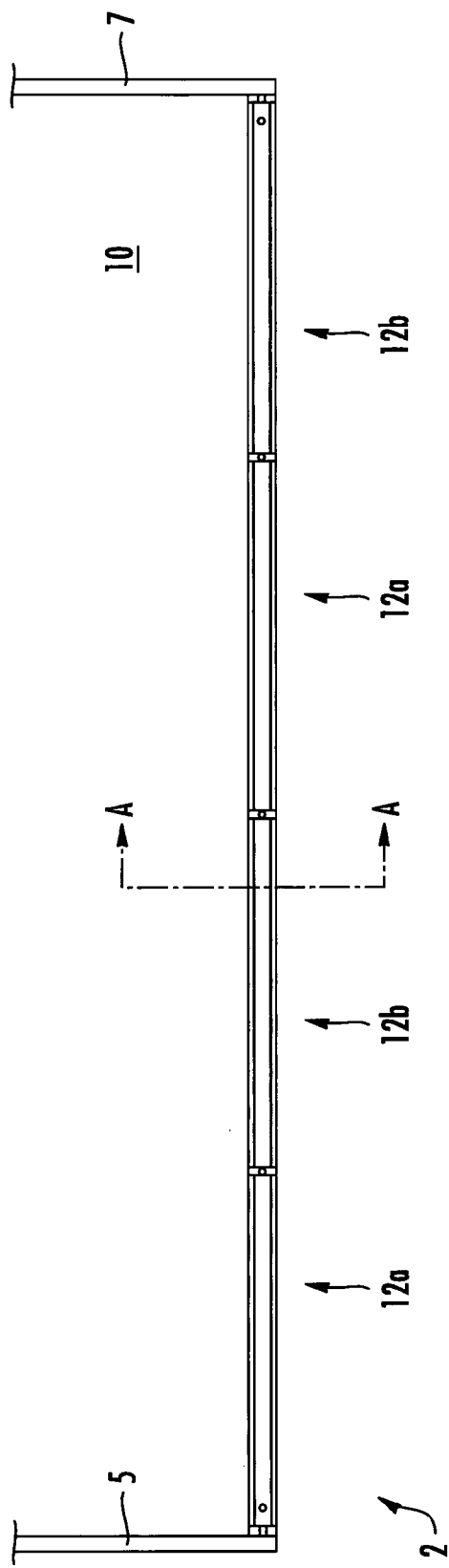


FIG. 2

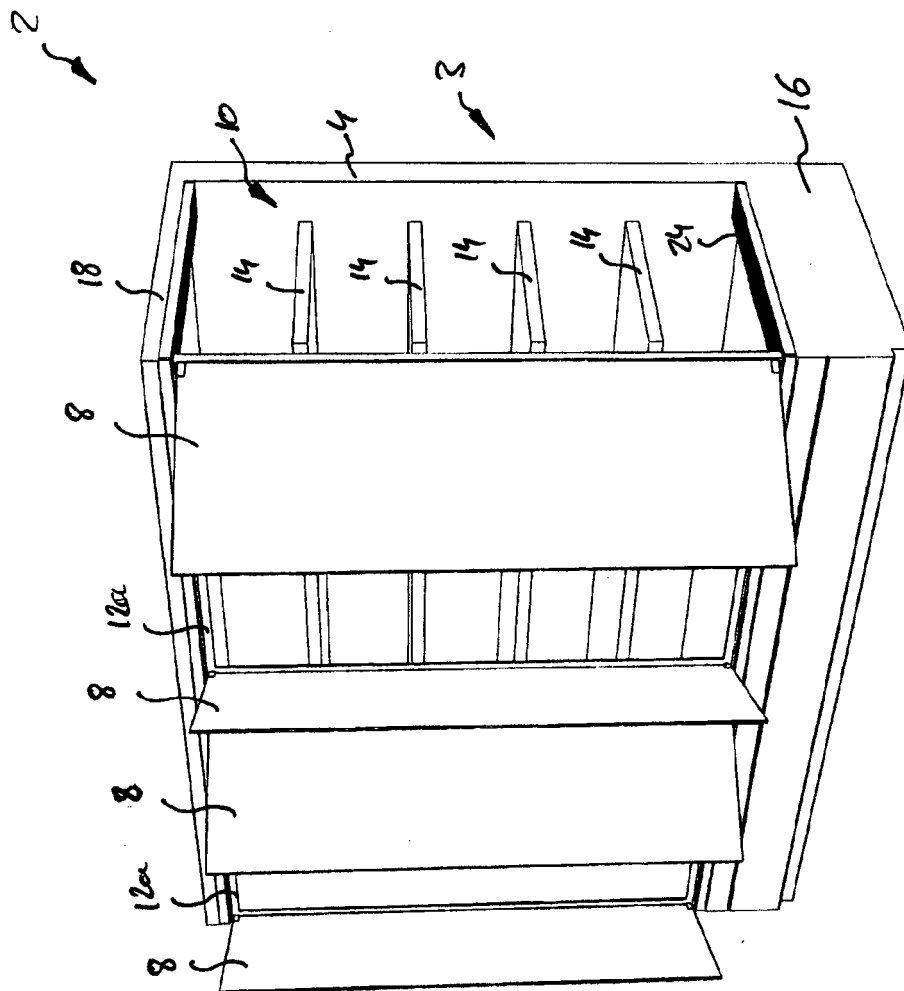
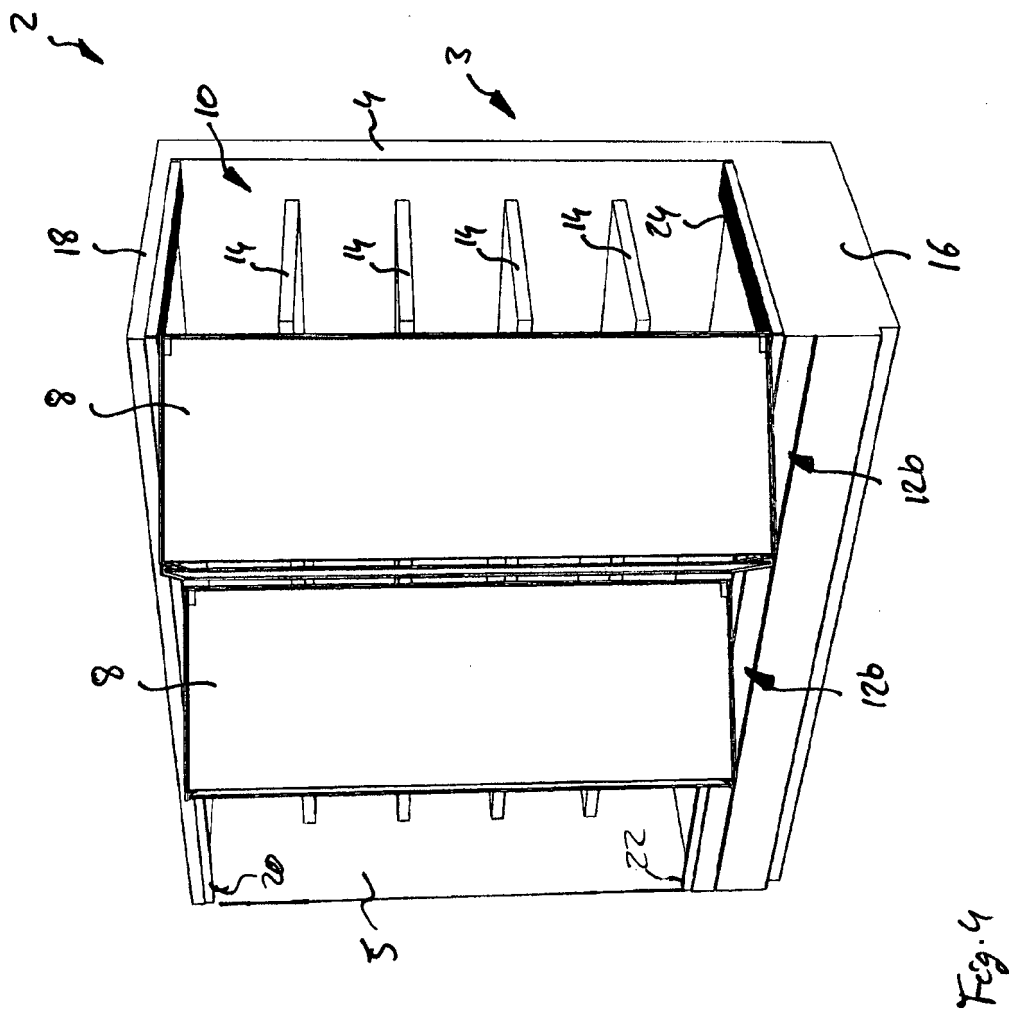


Fig. 3



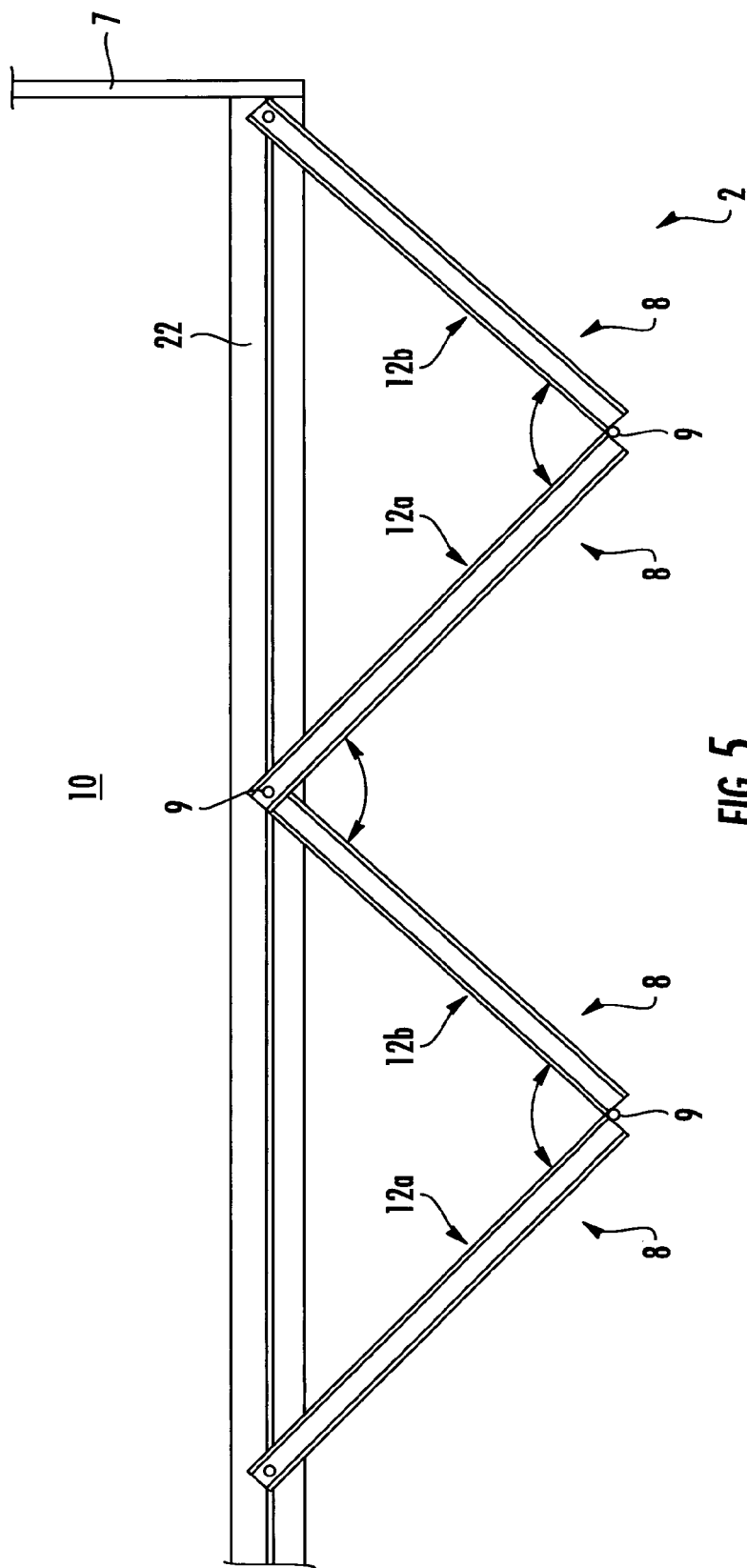


FIG. 5

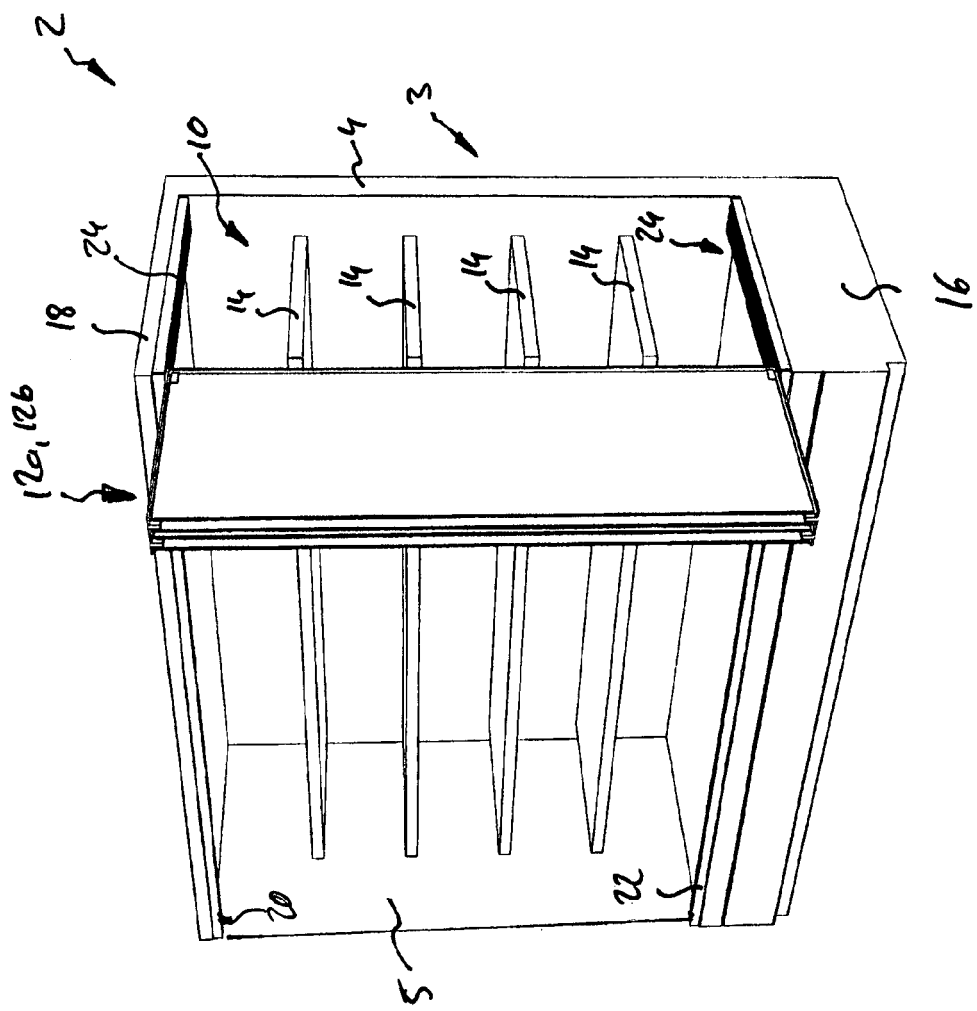


Fig. 6

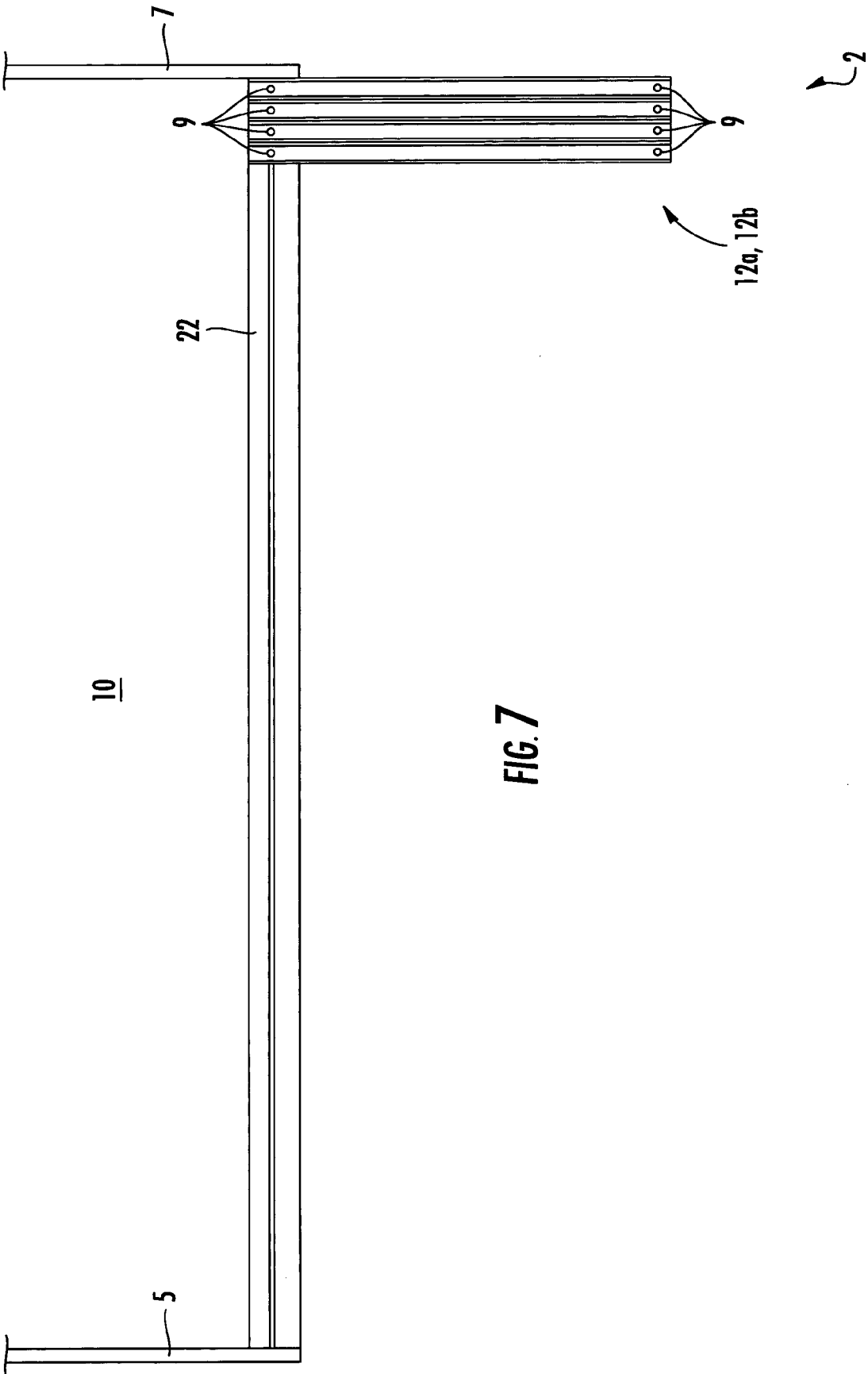


FIG. 7

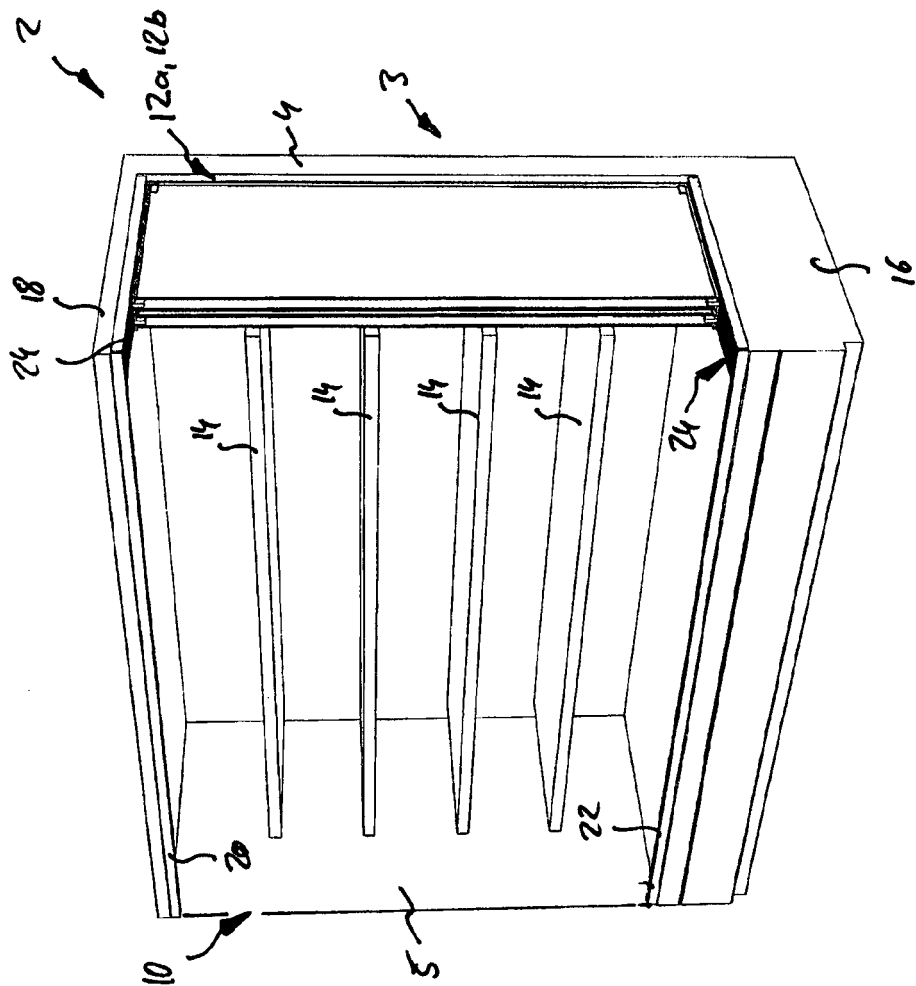


Fig. 8

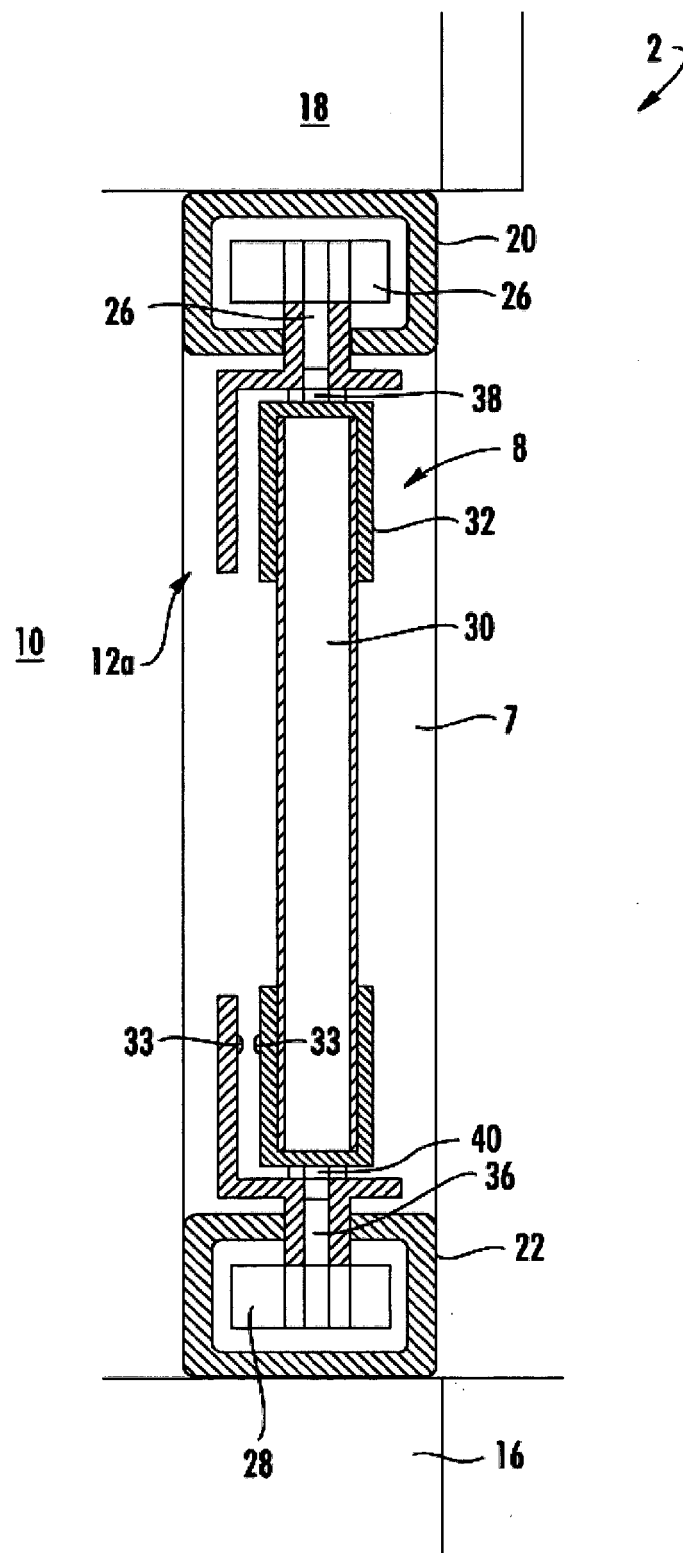


FIG. 9

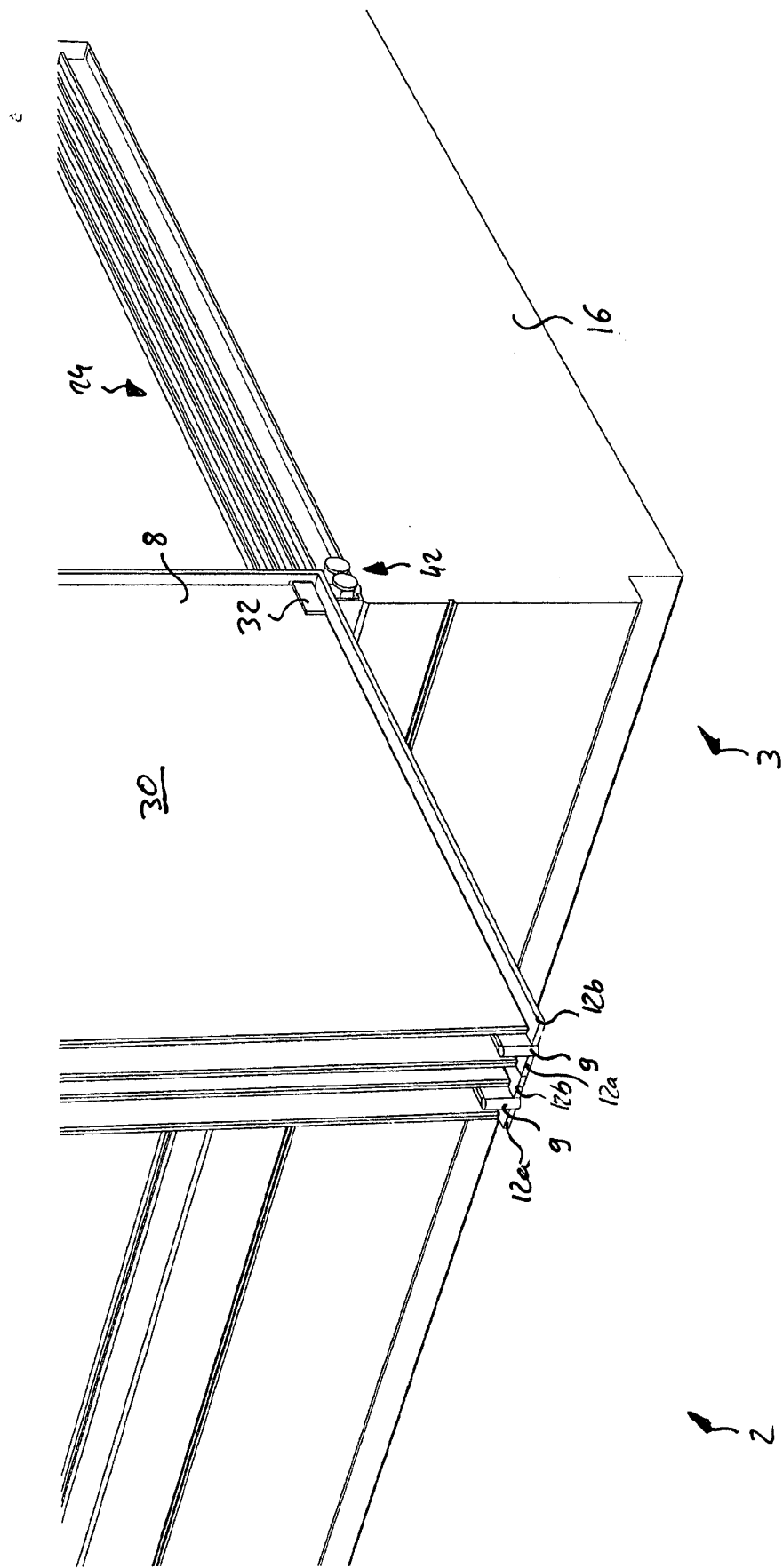


Fig. 10

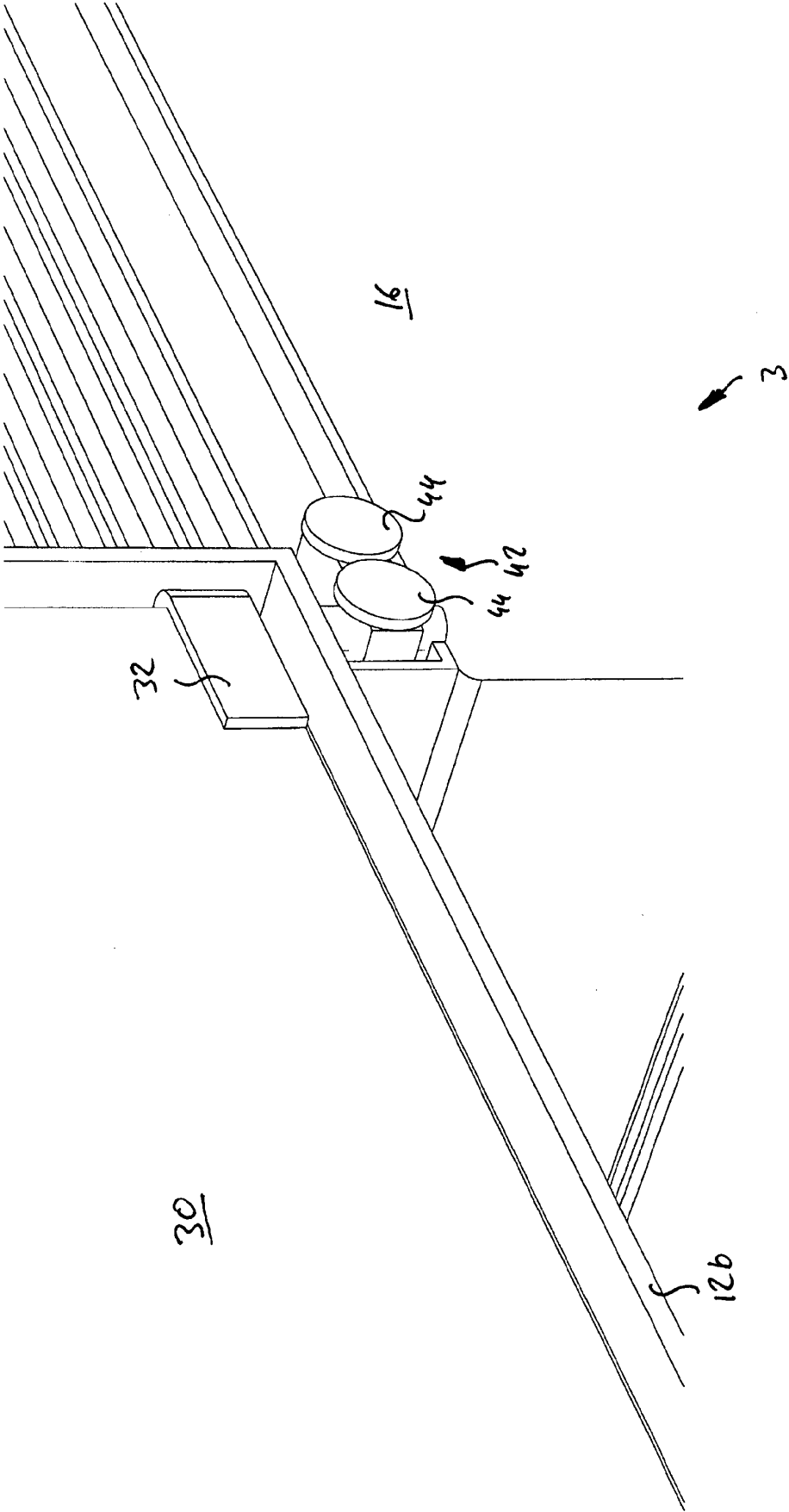


Fig. 11

REFERENCES CITED IN THE DESCRIPTION

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