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(54) Title: PRODUCT DISPLAY ASSEMBLY

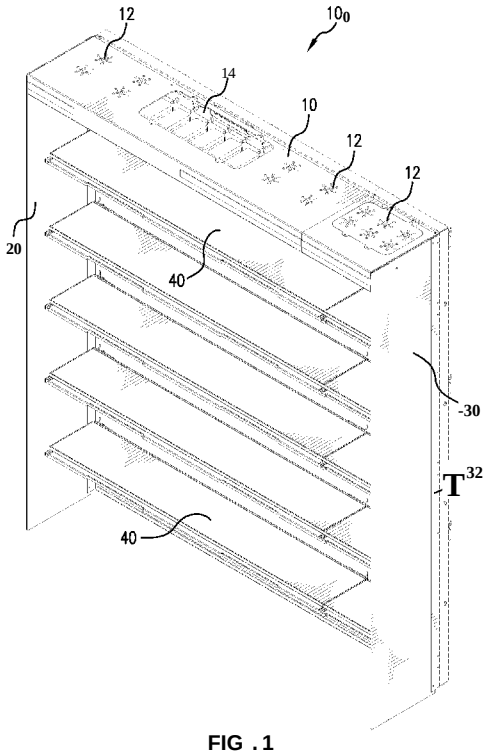

FIG . 1

(57) Abstract: Exemplary embodiments of a product display assembly are provided for displaying various sized products in modules of varying sizes. A product display assembly can be provided, having one or more shelves provided along a width of the product display assembly, a plurality of hang extrusions provided along a length of a bottom portion of each of the shelves, wherein each hang extrusion comprises a top portion, a vertical portion extending from the top portion, and a base portion extending from the vertical portion, a plurality of hanging mechanisms each having a first end configured to be supported by the base portion of the hang extrusion and a second end, and one or more modules configured to display products therein and connected to a second end of the hanging mechanism for supporting the module on the shelf.

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PRODUCT DISPLAY ASSEMBLY

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application relates to and claims priority from United States Provisional Patent Application Serial No. 62/022,048 filed July 8, 2014, the entire disclosure of which is hereby incorporated herein by reference.

FIELD OF THE DISCLOSURE

[0002] The present disclosure relates to exemplary embodiments of a product display assembly, and more particularly, to exemplary embodiments of a product display assembly having shelves to accommodate various sizes of products.

BACKGROUND OF THE DISCLOSURE

[0003] Typically, in retail environments, for example, floor/shelf space can be limited and the retailers usually attempt to maximize the amount of products they can store/display in their retail space. Additionally, racks are commonly used to display various types of items throughout the store. However, sizes and shapes of the items displayed on the racks vary from item to item. Therefore, the racks are often not utilized most efficiently, as empty spaces result. That is, typical racks may be designed and sized to optimally hold a particular quantity of a particular item. But, if that same rack is used to hold another type of item, empty spaces on each shelf of the rack will result. Further, shelves only allow for a certain size rack to be fixed on each shelf. There is a long-standing need in retail environments for a product display assembly that can accommodate racks of various sizes that can hold products of varying size.

SUMMARY OF EXEMPLARY EMBODIMENTS OF THE DISCLOSURE

[0004] At least some of the above described problems can be addressed by exemplary embodiments of the product display assembly according to the present disclosure. Exemplary embodiments of a product display assembly are provided that can accommodate modules of varying size that can accommodate products of various sizes.

[0005] In some exemplary embodiments, an apparatus for hanging modules on a shelf is provided, comprising one or more hang extrusions provided along a length of a shelf, each hang extrusion comprising a top portion, a vertical portion extending from the top portion, and a base portion extending from the vertical portion, the base portion having a left edge portion and a right edge portion that extend outward past a width of the vertical portion. The left edge portion and the right edge portion can extend past the width of the vertical portion at an equal distance. The top portions of each of the hang extrusions can be integral with each other along the length of the shelf.

[0006] The apparatus can further comprise a hanging mechanism configured to be supported by a hang extrusion at a first end and connect to a module at a second end. The first end of the hanging mechanism can comprise a top portion having a left edge portion configured to abut with an edge portion of a hang extrusion, and a right edge portion configured to abut with an edge portion of a hanging extrusion. The left edge portion of the top portion can abut with a right edge portion of a first hanging extrusion and the right edge portion of the top portion can abut with a left edge portion of a second hanging extrusion adjacent to the first hanging extrusion. The second end of the hanging mechanism can be configured to be connected to a side wall of the module. The hanging mechanism can further comprise a middle portion between the first end and the second end of the hanging mechanism. The middle portion can comprise a curved portion extending away from the first end of the hanging mechanism.

[0007] In some exemplary embodiments, a product display assembly can be provided, comprising one or more shelves provided along a width of the product display assembly, a plurality of hang extrusions provided along a length of a bottom portion of each of the shelves, wherein each hang extrusion comprises a top portion, a vertical portion extending from the top portion, and a base portion extending from the vertical portion, a plurality of hanging mechanisms each having a first end configured to be supported by the base portion of the hang extrusion and a second end, and one or more modules configured to display products therein and connected to a second end of the hanging mechanism for supporting the module on the shelf.

[0008] The base portion of each hang extrusion can have a left edge portion and a right edge portion that extend outward past a width of the vertical portion. The first end of the hanging mechanism can comprise a top portion having a left edge portion configured to abut with a right edge portion of a first hanging extrusion and a right edge portion configured to abut with a left edge portion of a second hanging extrusion adjacent to the first hanging extrusion. The top portions of the plurality of hang extrusions can be integral with each other along the length of the shelf. The second end of the hanging mechanism can be configured to be connected to a side wall of the module.

[0009] Each module can have a first hanging mechanism connected to a first side wall of the module and a second hanging mechanism connected to a second side wall of the module. Each shelf can comprise a bull-nose provided along a front portion of each shelf, the bull-nose configured to cover the plurality of hanging extrusions in a first configuration and configured to flip up to expose the plurality of hanging extrusions in a second configuration.

[0010] The product display assembly can comprise a top header having a first side and a second side, a left aisle blade connected to the first side of the top header, a right aisle blade connected to the second side of the top header, and a back wall connected to the top header,

left aisle blade and right aisle blade, wherein each of the one or more shelves is provided between the left aisle blade and the right aisle blade. A plurality of modules each capable of holding products of various sizes can be provided on each shelf between the left aisle blade and the right aisle blade. Modules of varying width can be provided on each shelf between the left aisle blade and the right aisle blade.

[0011] The product display assembly can further comprise one or more adjustable brackets on the back wall configured to hang the product display assembly to another wall.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The foregoing and other exemplary objects of the present disclosure will be apparent upon consideration of the following detailed description, taken in conjunction with the accompanying exemplary drawings and claims, in which like reference characters refer to like parts throughout, and in which:

[0013] Figure 1 is a perspective view of a product display assembly according to an exemplary embodiment of the present disclosure;

[0014] Figure 2 is a lower right front perspective view of a product display assembly according to an exemplary embodiment of the present disclosure;

[0015] Figure 3 is a rear view of a product display assembly according to an exemplary embodiment of the present disclosure;

[0016] Figure 4 is a front view of a product display assembly according to an exemplary embodiment of the present disclosure;

[0017] Figure 5 is a close-up view of a module of the product display assembly according to an exemplary embodiment of the present disclosure;

[0018] Figure 6 is an illustration of the hang extrusion of the product display assembly according to an exemplary embodiment of the present disclosure;

[0019] Figure 7 is an illustration of the hang extrusion and hanging mechanism of the product display assembly according to an exemplary embodiment of the present disclosure; and

[0020] Figure 8 illustrates an inner side view of the product display assembly according to an exemplary embodiment of the present disclosure.

[0021] Throughout the figures, the same reference numerals and characters, unless otherwise stated, are used to denote like features, elements, components or portions of the illustrated embodiments. Moreover, while the subject disclosure will now be described in detail with reference to the figures, it is done so in connection with the illustrative embodiments. It is intended that changes and modifications can be made to the described embodiments without departing from the true scope and spirit of the subject disclosure.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS OF DISCLOSURE

[0022] Exemplary embodiments of the product display assembly of the present disclosure will now be described with reference to the figures. The following description of the various embodiments is merely exemplary in nature and is in no way intended to limit the scope of the disclosure, its application, or uses.

[0023] Figure 1 is a perspective view of a product display assembly according to an exemplary embodiment of the present disclosure. The product display assembly 100 can have a top header 10, a left aisle blade 20, a right aisle blade 30 and one or more shelves 40 provided between the left aisle blade 20 and right aisle blade 20. The top header 10 and shelves 40 can be connected with the left aisle blade 20 and right aisle blade 30 by any type of mechanical connector, such as hinges, nails, screws, or can be made integral with the aisle blades in some embodiments. The top header 10, left aisle blade 20, right aisle blade 30 and shelves 40 can be made of any type of material, such as wood, metal, plastic, ceramic,

composite material or any combination thereof. Each shelf 40 can be a unitary piece, or can be made of two or more pieces provided along the same horizontal plane.

[0024] The top header 10 can have lighting, such as LED's 12, in any design, shape or quantity. A transformer can be provided within an internal tray 14 of the top header 10. Providing the transformer within the internal tray 14 can allow for servicing of the product display assembly 100 without de-merchandising the entire product display assembly 100, and can allow for a neat assembly with better electrical distribution for the electronic components of the product display assembly 100. A header cover (not shown) can be provided to cover the internal tray 14. Lighting, such as an LED strip 32, can be provided within the right aisle blade 30 (and/or left aisle blade 20) for providing an illuminated aisle blade.

[0025] Figure 2 is a lower right front perspective view of a product display assembly according to an exemplary embodiment of the present disclosure. The top header 10 can have lighting, such as one or more LED strips 16, to provide light for an aesthetic effect. The top header 10 can also have one or more LED strips 18 along a bottom front portion of the top header providing down lighting for the shelves 40 below. Each shelf 40 can have lighting, such as LED tubes 42, along a bottom front portion to provide down lighting for any products displayed on the shelves 40. In some exemplary embodiments, the LED tubes 42 are not visible from a front view.

[0026] Figure 3 is a rear view of a product display assembly according to an exemplary embodiment of the present disclosure. The back wall 50 can have one or more brackets 52 that allow for attachment of the product display assembly 100 to another wall, such as a pegwall on a gondola. The brackets 52 are provided along the back wall 50 and connected to the back wall 50 through screws, nails or other similar mechanical mechanisms, or can be made integral with the back wall 50 in some embodiments. The brackets 52 can be adjustable vertically by screws/slots to different locations along the back wall 50, to adjust to

the fittings on another wall that the product display assembly is connected to. This allows the back wall 50 to be hung on other walls of varying size and provides corresponding slots into which the brackets 52 can adjust. Portions 54 of the back wall 50 can be provided with slots for the shelves 40 to be mounted on, and can provide for vertical adjustment of the shelves 40 along the back wall.

[0027] Various other configurations can be provided along the back wall 50, such as electrical outlets and wires for the various lighting of the product display assembly within the back wall so they cannot be seen. For example, panel jacks can be provided along a back portion of each shelf 40 along the back wall 50. In some embodiments, a panel jack can be provided behind the top header 10 along the back wall 50 that provides for wiring (not shown and located within the back wall 50) to any lighting on each of the shelves 40, as well as for any lighting along the aisle blades 20 and 30.

[0028] Figure 4 is a front view of a product display assembly according to an exemplary embodiment of the present disclosure. As shown, one or more modules 60 can be provided along each shelf 40. A bullnose 62 can be provided that flips up so that the modules 60 can be moved or replaced. The bullnose 62 can be provided to cover the hang extrusions that the modules 60 are mounted on, as will be further explained below. Lighting, such as LED strips, can be provided on each bullnose 62 to illuminate any graphics placed on the bullnose 62, such as advertisement or product labels. In some exemplary embodiments, the bullnose 62 can also be provided on the shelf 40, as shown in Figure 8, which is an inner side view of the product display assembly according to an exemplary embodiment of the present disclosure. The bullnose 62 can flip up and down, thereby hiding the hang extrusions and LED lights on the shelf 40, as discussed below.

[0029] Figure 5 is a close-up view of a module of the product display assembly according to an exemplary embodiment of the present disclosure. The module 60 can have side walls

68, and can have a tray 66 with a graphics channel 64, providing for merchandise information. The tray 66 can allow for stacks of products to be provided along the width of each module 60, and multiple rows each having one or more products stacked from the front to the back of the module 60. One or more hang extrusions 70 are provided along the bottom portion of each shelf 40 for hanging the modules 60. The hang extrusions 70 can be separate components from the shelf 40 or can be made integral with the shelf 40. Hanging mechanisms 80 can be attached to side walls 68 of the module 60 that connect to the hang extrusions 70.

[0030] Figure 6 is an illustration of the hang extrusion of the product display assembly according to an exemplary embodiment of the present disclosure. As seen in Figure 6, hang extrusions 70 can be provided along a bottom portion of each shelf 40 at x-increments having a width w approximately a same width as a shelf 40 of the product display assembly 100. Hanging mechanism 80 can have one or more slots 82 for a connection to the module 60, such as a side wall 68 of the module. Screws or other connections can be provided along the side walls 68 of the module allowing for attachment of the hanging mechanisms 80 to the side walls 68. The hanging mechanism 80 slides on the hang extrusions 70 to hold a module 60 in place, as shown in Figure 5. This allows for modules 60 of varying width to be placed on the shelves 40 of the product display assembly 100, which can have a variable width along the x-increments of the hang extrusions 70. One or more modules 60 of varying width can be provided along each shelf 40 of the product display assembly 100, incorporating varying styles and sizes of merchandise. The hang extrusions 70 along the bottom of the shelf 40 allow hanging mechanisms 80 connected to the modules 60 to be provided along any location of the shelf 40.

[0031] Figure 7 is an illustration of the hang extrusion and hanging mechanism of the product display assembly according to an exemplary embodiment of the present disclosure.

Each hang extrusion 70 provided along the bottom portion of the shelf 40 can be spaced at a distance x from each other, and can have an upside-down "T-shape." Each hang extrusion has a top portion 72, a vertical portion 74 extending from the top portion 72 at a first end, and connected to a base portion 77 at a second end. The base portion 77 has a left edge portion 76 and a right edge portion 78 that extend horizontally outward from the vertical portion 74, causing the base portion 77 to have a greater width than the vertical portion 74. In some exemplary embodiments, each hang extrusion 70 has a top portion 72 that can be integral with the top portions of the other hang extrusions 70. Breaks 90 can be provided between the top portions 70 such that a certain number of hang extrusions are provided incrementally along a length of the shelf 40.

[0032] Each hanging mechanism 80 can have a top portion 85, a middle portion 86 having a curvature 87 and a lower portion 88. The top portion 85 and middle portion 86 can resemble a "Y-shape." The top portion 85 has a left edge portion 83 and a right edge portion 84. The left edge portion 83 abuts on a right edge portion 78 of a hang extrusion 70, and the right edge portion 84 abuts on a left edge portion 76 of an adjacent hang extrusion 70. This provides for stability of the hanging mechanism 60 that is connected to the module 60. The top portion 85 has a middle portion 86 that extends vertically downward to a curved portion 87 that curves away from the top portion 85, which in turn connects to a lower portion 88. Slots or holes 82 can be provided along the lower portion 88 for connection to a side wall 68 of a module 60.

[0033] Various other considerations can also be addressed in the exemplary embodiments of the present disclosure. The exemplary embodiments of the present disclosure can be used in various configurations and in different systems. For example, the shelves including the hang extrusions and the hanging mechanisms can be used on a variety of sizes of product display assemblies, having one or more shelves, and having varying heights and widths,

allowing for a display of a multitude of various sized products all on one product display assembly. Various configurations and mechanisms can be used to hang the product display assembly to a wall. Various lighting and LED designs can be provided on the product display assembly for lighting of the various products on the product display assembly, and the wiring and power can be hidden within the top header and back wall, as well as the shelves. The product display assembly can allow for the display of a multitude of signs for the products on display.

[0034] The foregoing merely illustrates the principles of the disclosure. Various modifications and alterations to the described embodiments will be apparent to those skilled in the art in view of the teachings herein. It will thus be appreciated that those skilled in the art will be able to devise numerous systems, arrangements, manufacture and methods which, although not explicitly shown or described herein, embody the principles of the disclosure and are thus within the spirit and scope of the disclosure. The disclosures of all systems, documents and publications cited herein are hereby incorporated herein by reference in their entireties.

WHAT IS CLAIMED IS:

1. An apparatus for hanging modules on a shelf, comprising:

one or more hang extrusions provided along a length of a shelf, each hang extrusion comprising:

a top portion;

a vertical portion extending from the top portion; and

a base portion extending from the vertical portion, the base portion having a left edge portion and a right edge portion that extend outward past a width of the vertical portion.

2. The apparatus of claim 1, wherein the left edge portion and the right edge portion extend past the width of the vertical portion at an equal distance.

3. The apparatus of claim 1, wherein the top portions of each of the hang extrusions are integral with each other along the length of the shelf.

4. The apparatus of claim 1, further comprising:

a hanging mechanism configured to be supported by a hang extrusion at a first end and connect to a module at a second end.

5. The apparatus of claim 4, wherein the first end of the hanging mechanism comprises:

a top portion having a left edge portion configured to abut with an edge portion of a hang extrusion, and a right edge portion configured to abut with an edge portion of a hanging extrusion.

6. The apparatus of claim 5, wherein the left edge portion of the top portion abuts with a right edge portion of a first hanging extrusion and the right edge portion of the top portion abuts with a left edge portion of a second hanging extrusion adjacent to the first hanging extrusion.

7. The apparatus of claim 5, wherein the second end of the hanging mechanism is configured to be connected to a side wall of the module.

8. The apparatus of claim 7, wherein the hanging mechanism further comprises a middle portion between the first end and the second end of the hanging mechanism.

9. The apparatus of claim 8, wherein the middle portion comprises a curved portion extending away from the first end of the hanging mechanism.

10. A product display assembly comprising:

one or more shelves provided along a width of the product display assembly;

a plurality of hang extrusions provided along a length of a bottom portion of each of the shelves, wherein each hang extrusion comprises a top portion, a vertical portion extending from the top portion, and a base portion extending from the vertical portion;

a plurality of hanging mechanisms each having a first end configured to be supported by the base portion of the hang extrusion and a second end; and

one or more modules configured to display products therein and connected to a second end of the hanging mechanism for supporting the module on the shelf.

11. The product display assembly of claim 10, wherein the base portion of each hang extrusion has a left edge portion and a right edge portion that extend outward past a width of the vertical portion.

12. The product display assembly of claim 11, wherein the first end of the hanging mechanism comprises:

a top portion having a left edge portion configured to abut with a right edge portion of a first hanging extrusion and a right edge portion configured to abut with a left edge portion of a second hanging extrusion adjacent to the first hanging extrusion.

13. The product display assembly of claim 12, wherein each of the top portions of the plurality of hang extrusions are integral with each other along the length of the shelf.

14. The product display assembly of claim 10, wherein the second end of the hanging mechanism is configured to be connected to a side wall of the module.

15. The product display assembly of claim 14, wherein each module has a first hanging mechanism connected to a first side wall of the module and a second hanging mechanism connected to a second side wall of the module.

16. The product display assembly of claim 10, wherein each shelf further comprises:

a bull-nose provided along a front portion of each shelf, the bull-nose configured to cover the plurality of hanging extrusions in a first configuration and configured to flip up to expose the plurality of hanging extrusions in a second configuration.

17. The product display assembly of claim 10, wherein the product display assembly comprises:

a top header having a first side and a second side;

a left aisle blade connected to the first side of the top header;

a right aisle blade connected to the second side of the top header; and

a back wall connected to the top header, left aisle blade and right aisle blade;

wherein each of the one or more shelves is provided between the left aisle blade and the right aisle blade.

18. The product display assembly of claim 17, wherein a plurality of modules each capable of holding products of various sizes are provided on each shelf between the left aisle blade and the right aisle blade.

19. The product display assembly of claim 18, wherein modules of varying width are provided on each shelf between the left aisle blade and the right aisle blade.

20. The product display assembly of claim 17, further comprising:

one or more adjustable brackets on the back wall configured to hang the product display assembly to another wall.

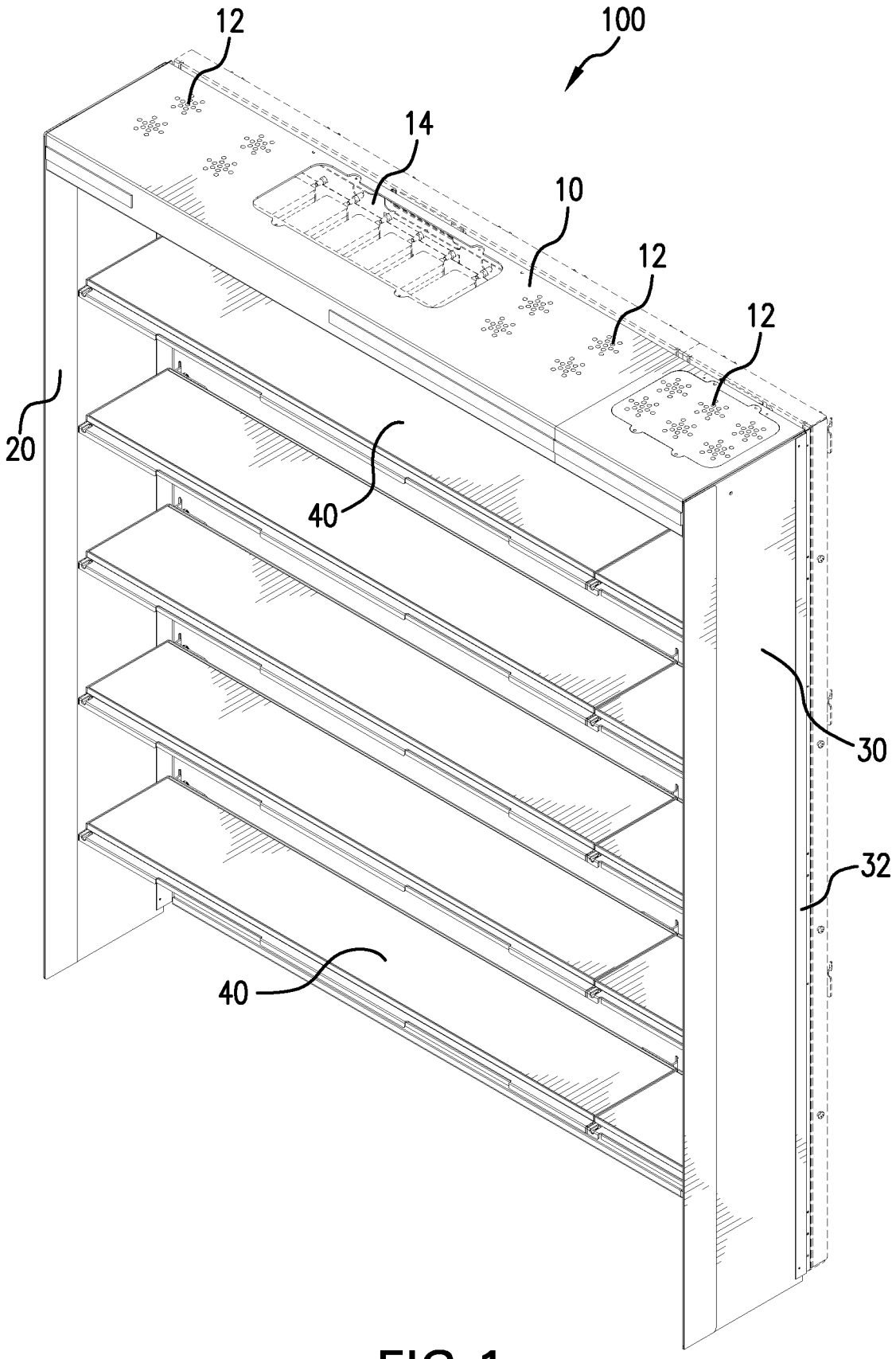

FIG. 1

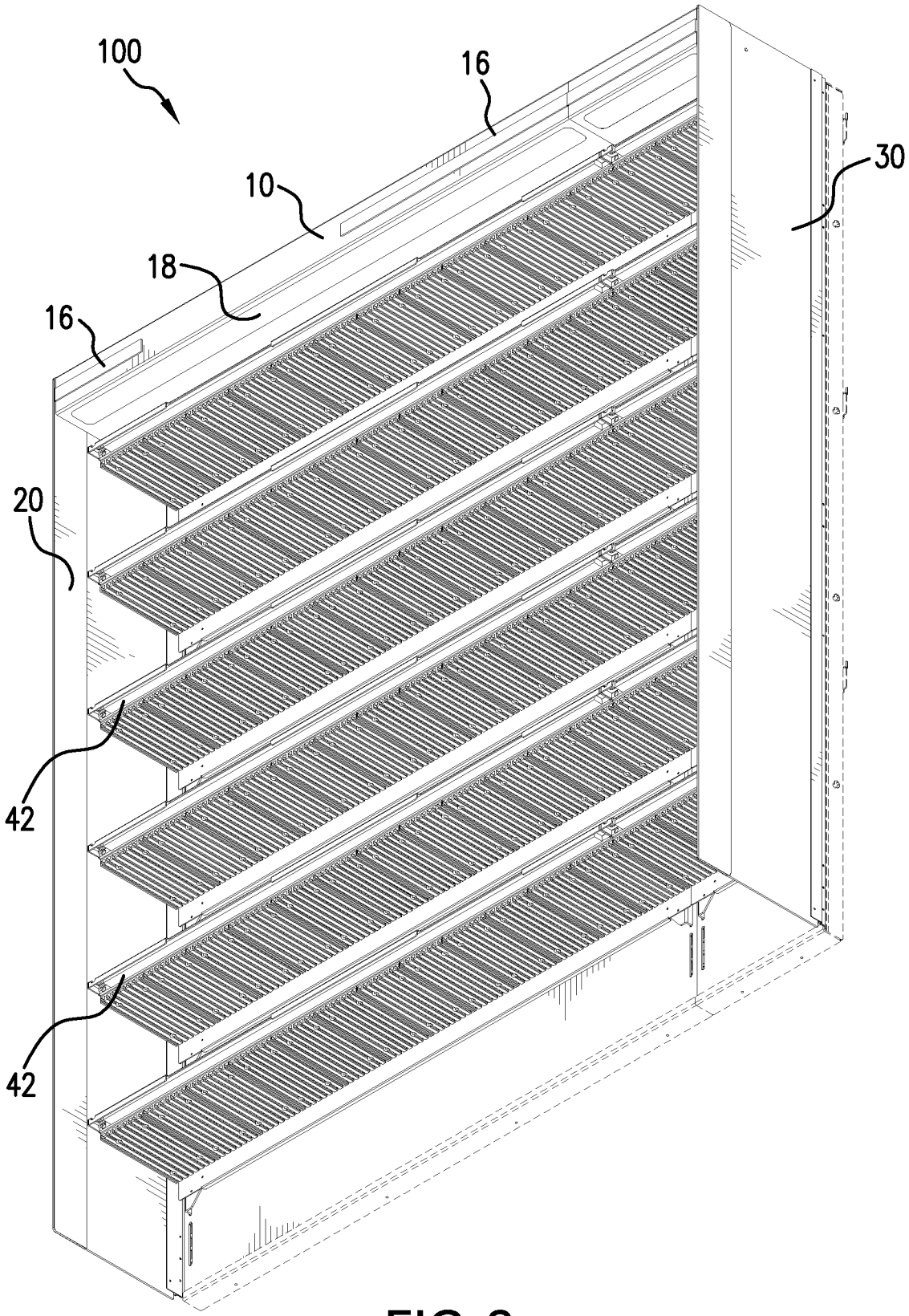

FIG.2

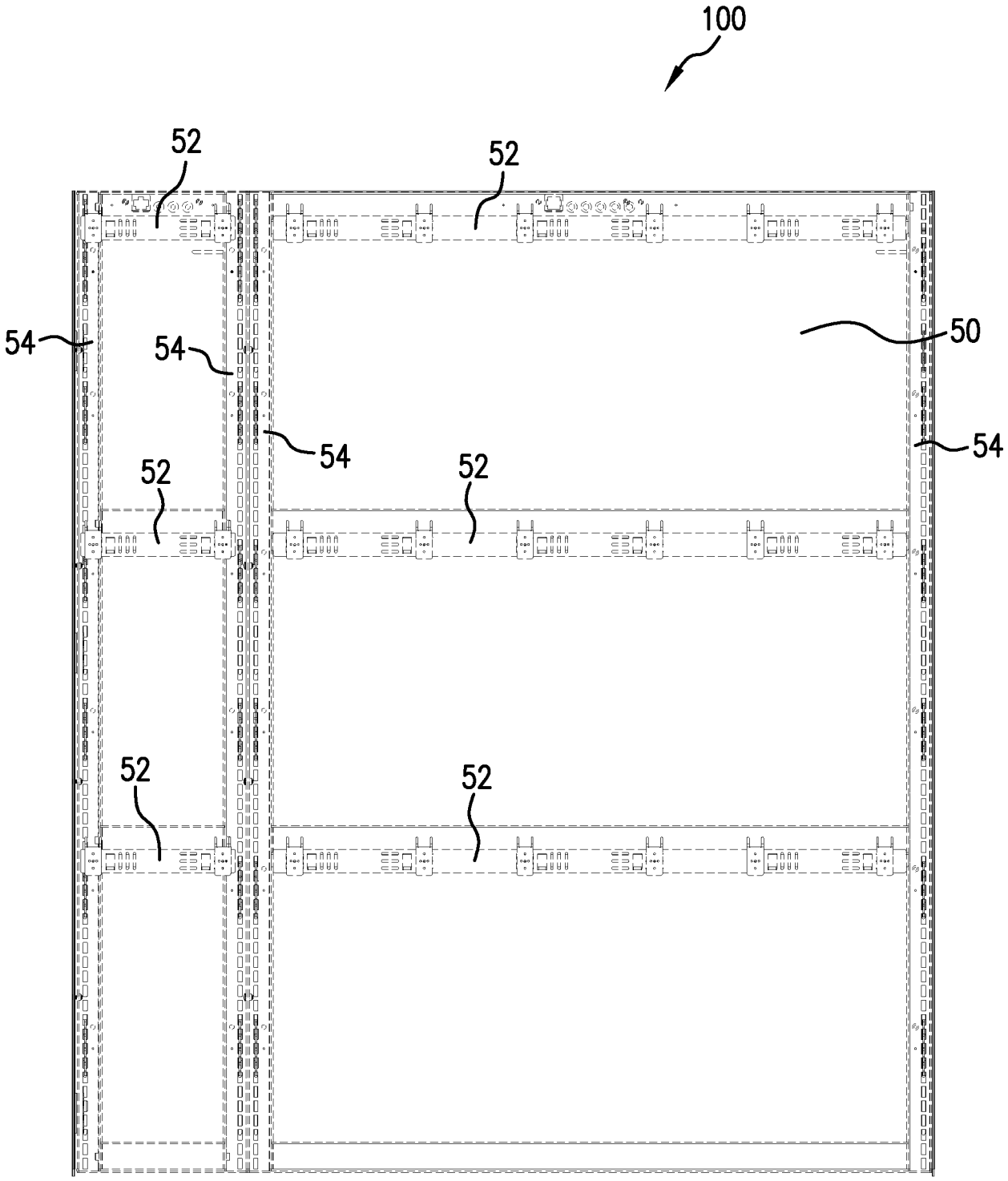

FIG.3

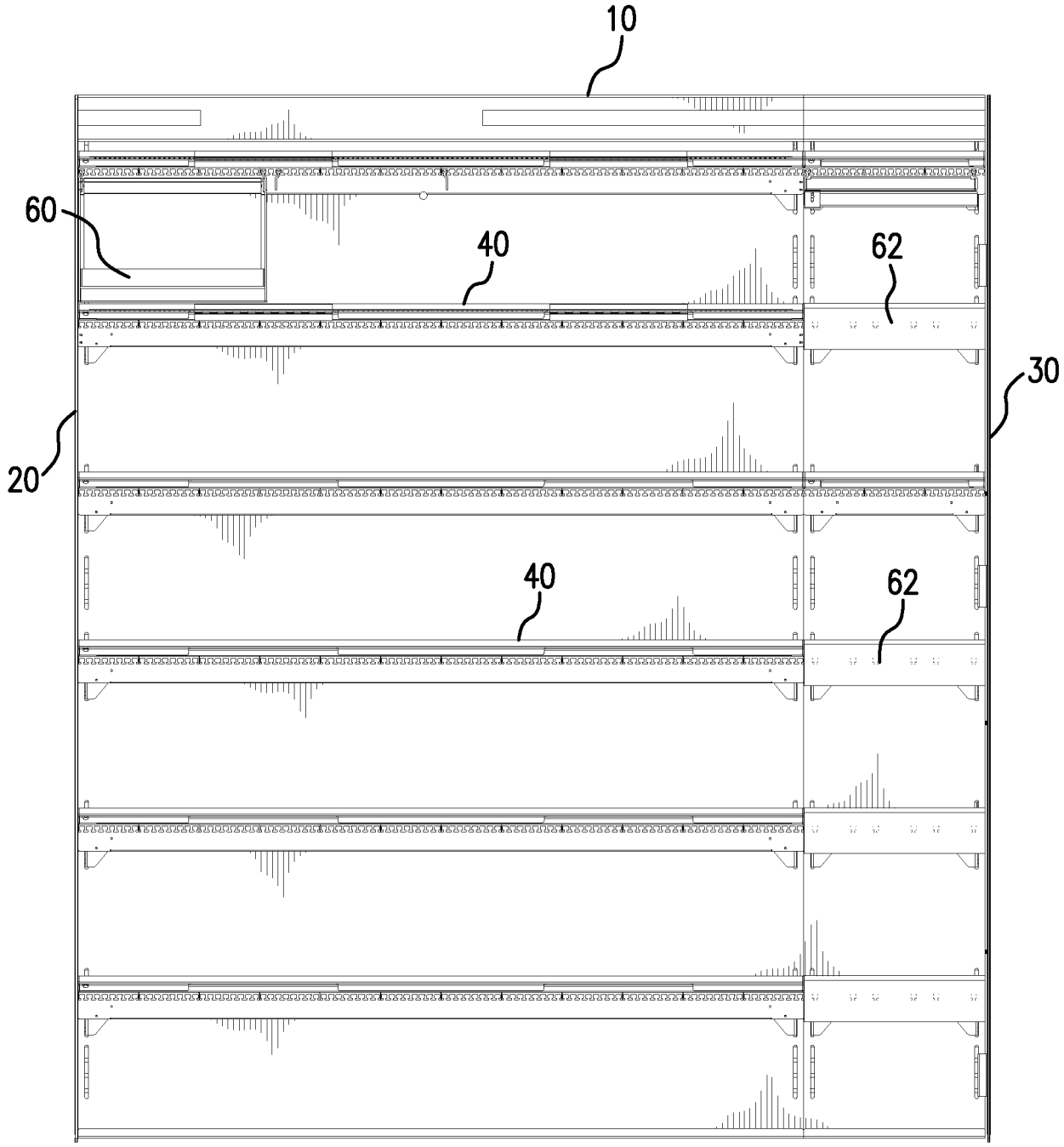

FIG.4

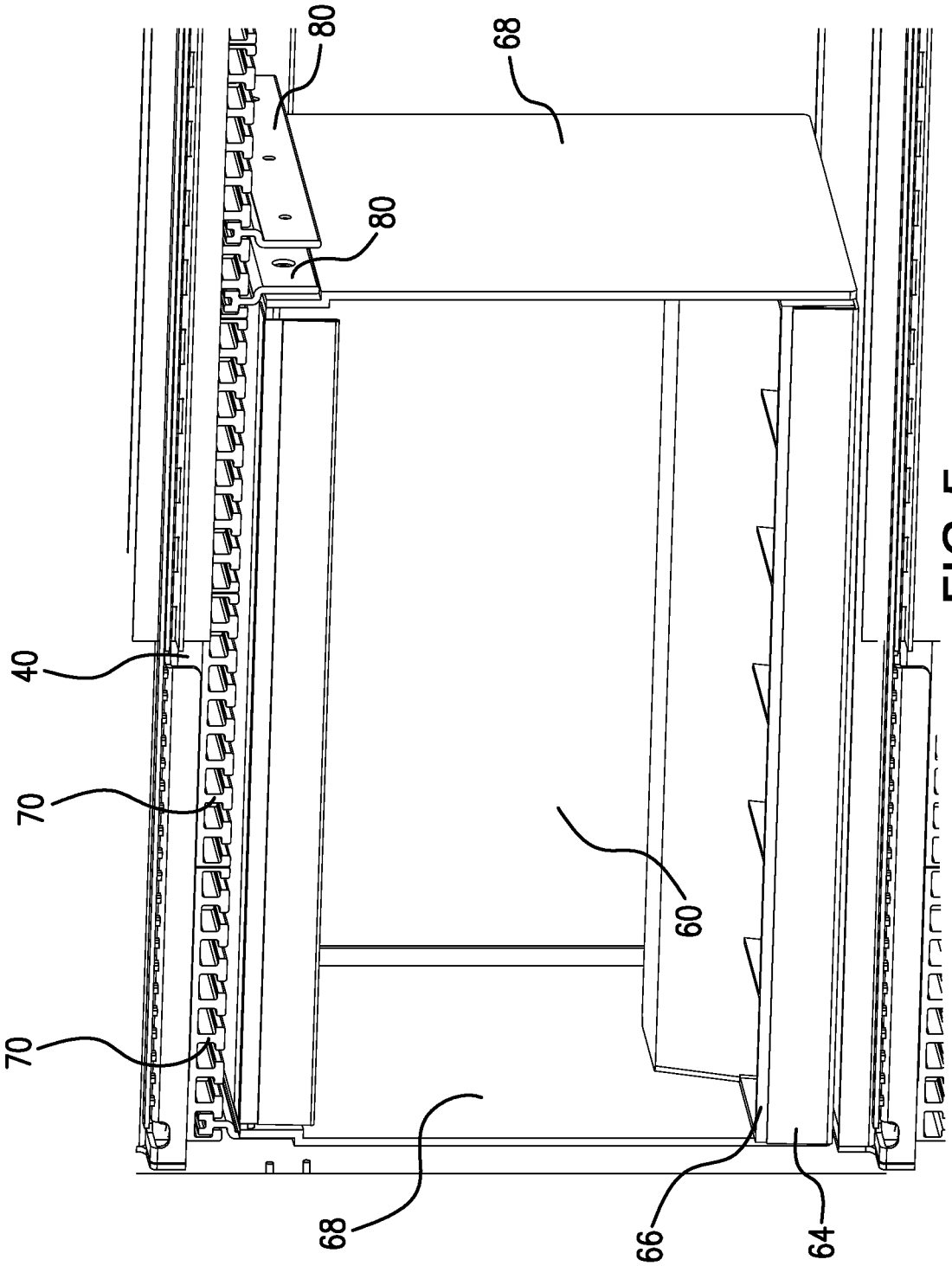

FIG.5

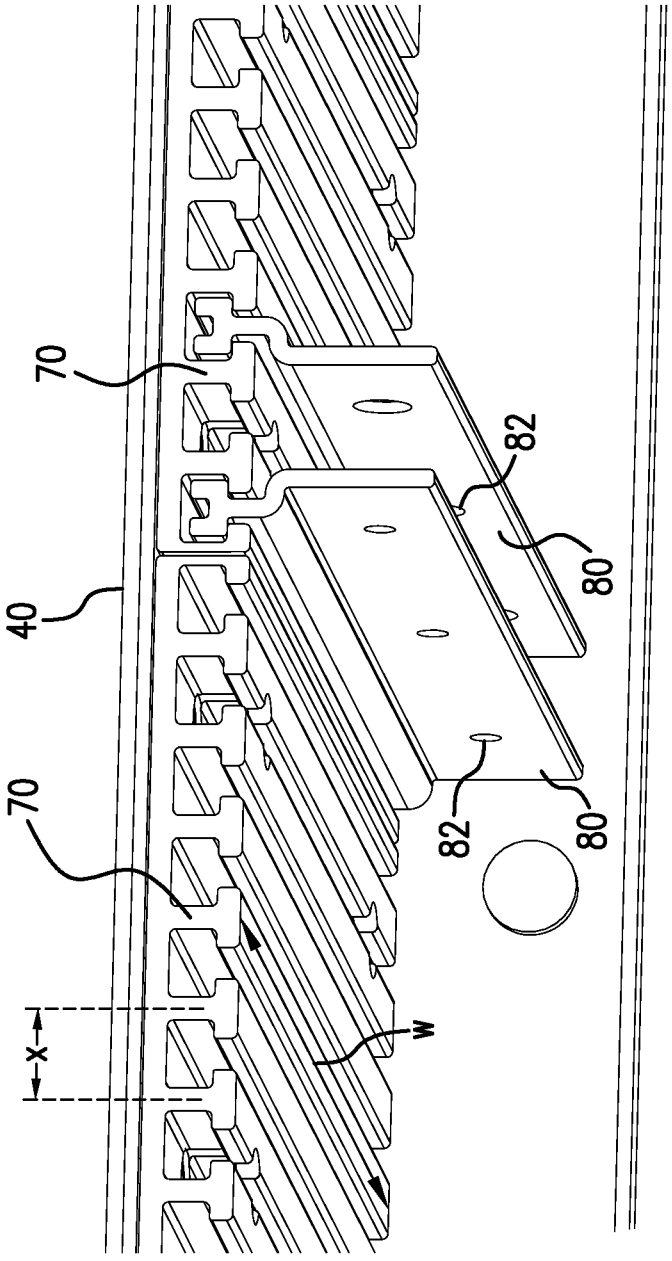

FIG.6

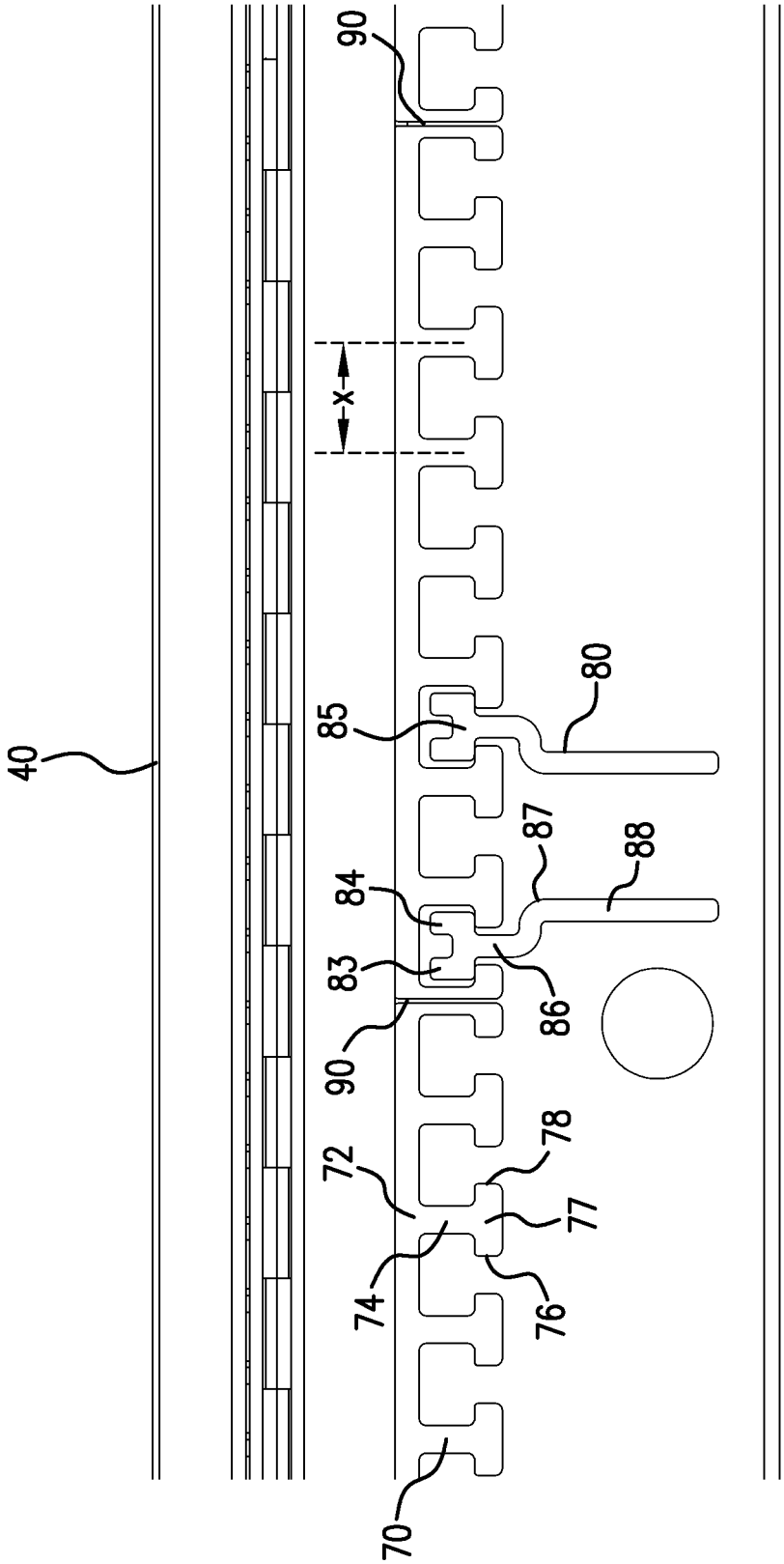

FIG.7

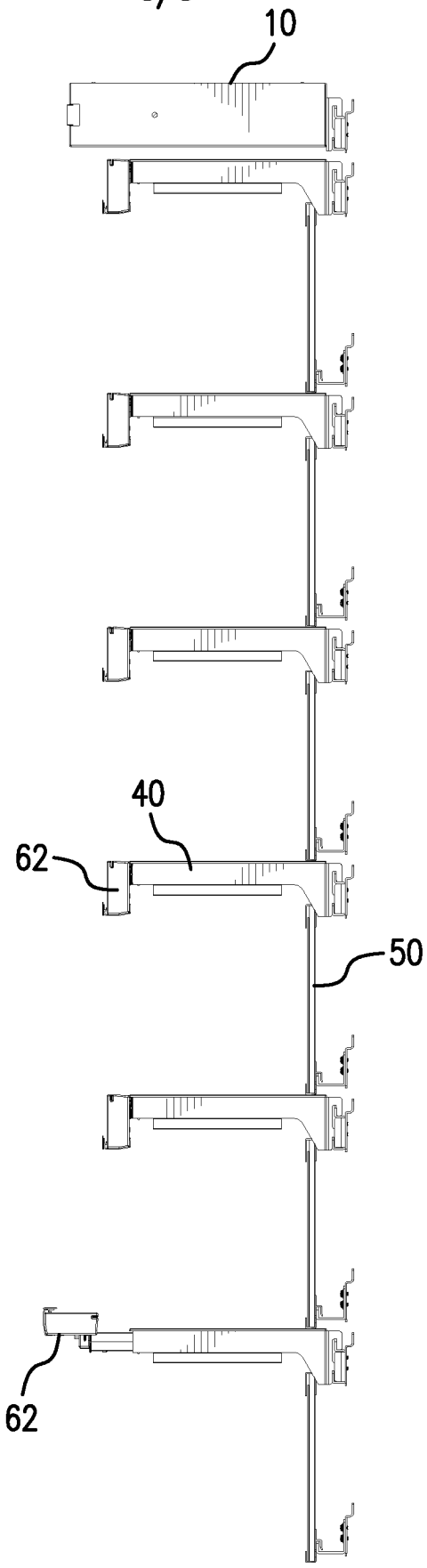

FIG.8

INTERNATIONAL SEARCH REPORT

International application No.
PCT7US15/3961 4

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A47F 1/12, 5/08, 7/28 (2015.01)
CPC - A47F 1/128, 5/0846, 7/285
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)
IPC(8) Classification(s): A47F 1/00, 1/12, 5/00, 5/01, 5/08, 7/14, 7/28 (2015.01)
CPC Classification(s): A47F 1/00, 1/128, 5/00, 5/0006, 5/0018, 5/0846, 5/143, 5/285

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)
PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data): hang, display, rack, shelf, shelves, slide, track, wall, dangle, slot, channel, groove, cover, flip, flap, jar, container, beverage, soda, golf club, sporting equipment, baseball bat, storage

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,964,359 A (MARINO F. A. JR.) October 12, 1999; figures 1-3; column 2, lines 60-65	1-7, 10-13
X	US 6,283,278 B1 (HOLZTRAGER W. J.) September 4, 2001; figures 1, 3; column 4, lines 5-10	1, 4, 10, 11, 17-20
X	US 4,019,638 A (MILLER M.) April 26, 1977; figures 7, 8; column 2, lines 20-25	1-2, 4-5, 7-11, 14-15
X	US 2,606,666 A (GRAY G.) August 12, 1952; figures 3, 4	1, 4
A	US 8,534,469 B2 (NORTHRUP R. L. JR. et al.) September 17, 2013; entire document	1-20
A	US 2005/0081418 A1 (FAST J. et al.) April 21, 2005; entire document	1-20
P, X	US 2014/0284440 A1 (THE PROCTER & GAMBLE COMPANY) September 25, 2014; figures 1, 2, 4A, 8	10, 16
A	US 5,960,967 A (NEIL G. A.) October 5, 1999; entire document	1-20
A	US 4,678,151 A (RADEK J. R.) July 7, 1987; entire document	1-20

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance
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Date of the actual completion of the international search	Date of mailing of the international search report
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