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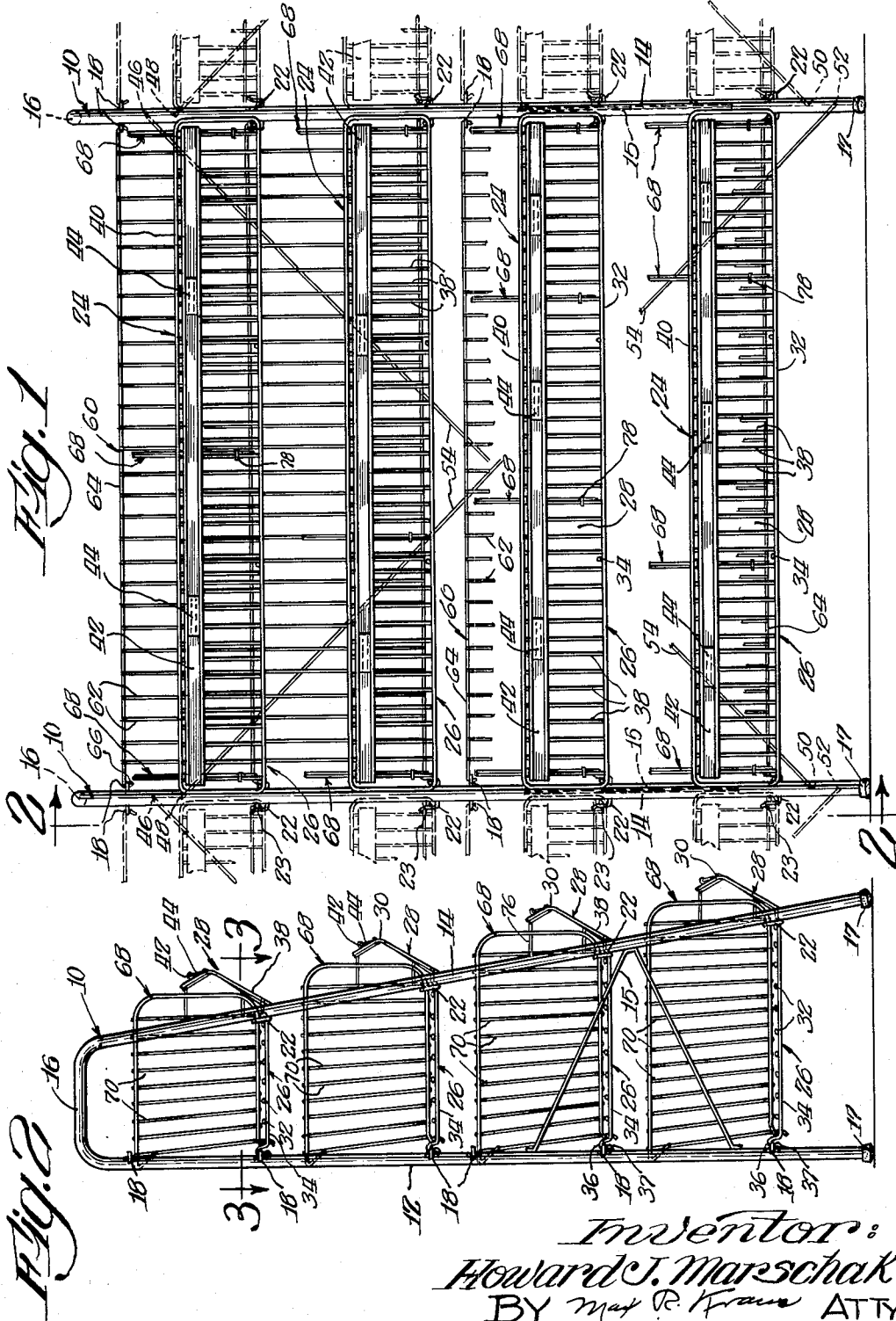
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DISPLAY AND STORAGE SHELVING

Filed June 27, 1962

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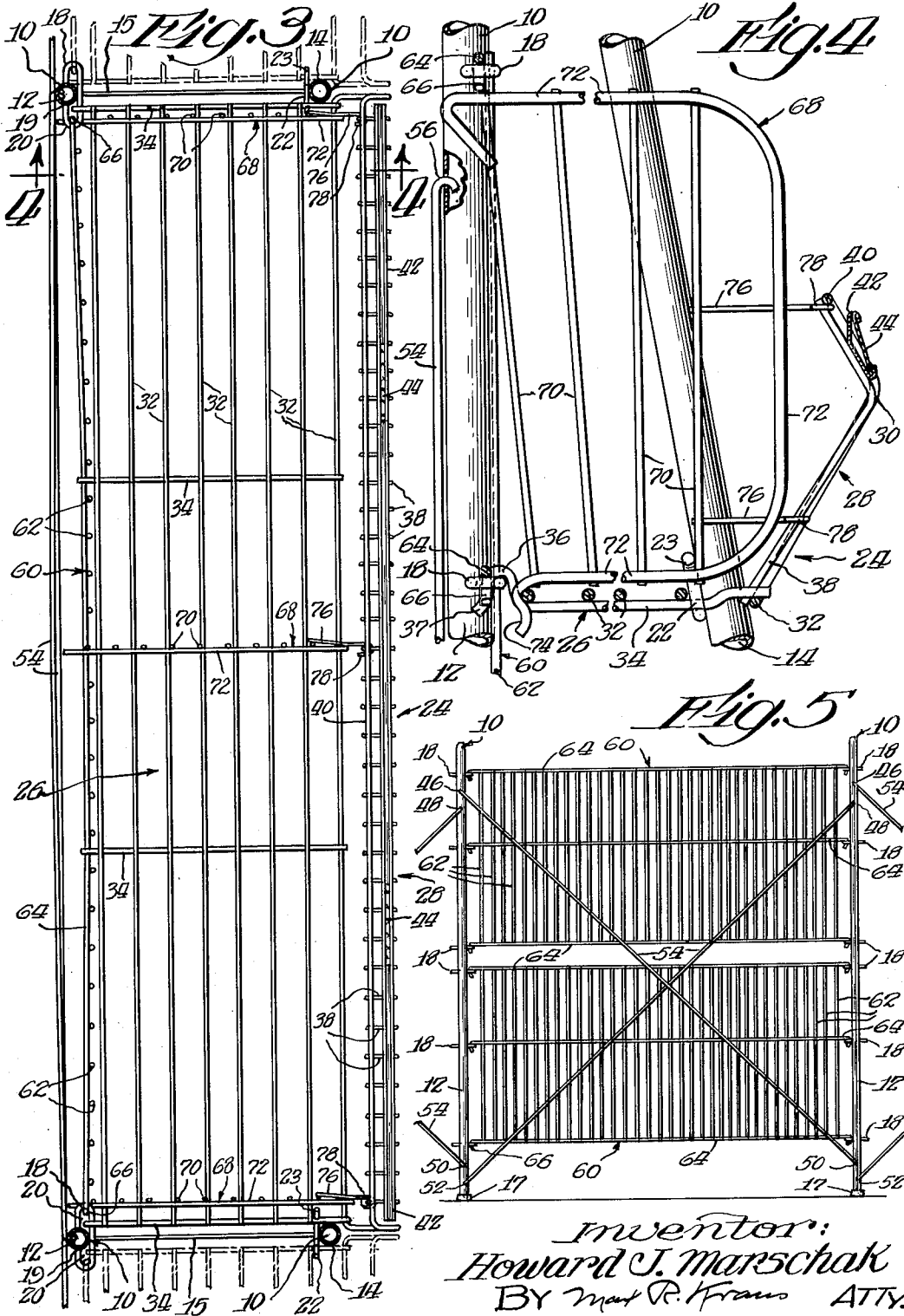
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2 Sheets-Sheet 2



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DISPLAY AND STORAGE SHELVING
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This invention relates to displays and storage shelving for displaying merchandise in stores and the like.

One of the objects of this invention is to provide display and storage shelving which includes shelves and supporting members which may be shipped and stored in collapsed condition to occupy a minimum of space, and which may be readily set up for use merely by attaching the parts together without the use of any other fastening elements.

Another object of this invention is to provide a display and storage unit which is formed of a few components which may be readily joined or connected to form a display and storage unit of any desired length and which is provided with removable dividers or wall members which may be secured to the shelves in any desired position to provide bins or containers of any desired size.

Another object of this invention is to provide a structure of the foregoing character which is very simple and inexpensive to manufacture, which is very simple to set up, and which may be readily dismantled.

Other objects and advantages will become apparent as this description progresses.

In the drawings:

FIGURE 1 is a front view of the individual unit showing the display made in accordance with this invention.

FIGURE 2 is an end elevational view taken on lines 2—2 of FIGURE 1.

FIGURE 3 is a plan view taken on lines 3—3 of FIGURE 2.

FIGURE 4 is an enlarged view taken on lines 4—4 of FIGURE 3, and

FIGURE 5 is a view on a reduced scale taken of the rear of the unit.

One section or unit will be specifically described, however, any number of sections or units may be ganged so that adjacent ganged sections or units form a continuation of the structure comprising this invention. When ganged, the adjacent shelving sections are connected to the same upright supporting member.

Referring specifically to the structure shown in the drawings, more specifically FIGURES 1 and 2, each section or unit includes a pair of upright supporting members 10 which are of identical construction. The supporting member is generally formed of tubular material and is bent to the configuration best shown in the end view of FIGURE 2. The supporting member comprises a vertically extending rear leg 12 and a forwardly inclined front leg 14 joined by a connecting top portion 16. The legs are provided with conventional rubber bottoms 17. A V-shaped wire or rod 15 extends between the rear and front legs 12 and 14 and is welded or brazed thereto for the purpose of preventing sway between the legs.

Secured to the rear leg 12 are a plurality of clip members generally designated by the numeral 18. The clip members are of identical construction and are generally C-shaped, as best seen in FIGURE 3, and are transversely positioned and secured to the rear leg 12 as at 19, by brazing, welding, or the like. When secured, the open portion of the clip is closed by the tubular leg so that, in effect, a pair of elongated eyelet members 20 are provided which extend on the opposite sides of the leg. The clips 18 are spacedly secured to the rear leg and are the means to which the wire shelving, to be described, is secured. The rear sections, to be described, are also secured, to said clips.

2

Secured to the front leg 14 in spaced relation, conforming to the spaced relation of the rear clips 18 which support the shelves, are brackets 22 formed of wire and generally of U-shape. These brackets are secured as by welding, brazing, and the like, to the front leg 14 so that the upwardly extending sides 23 of the brackets are on the opposite sides of the leg. The clip members 18 on the rear leg to which the shelf is adapted to be attached are in substantially horizontal alinement with the brackets 22 on the front leg. The wire shelving, to be described, is positioned between each pair of supporting members 10. Any number of tiers desired may be formed, depending upon the height of the supporting members. In the drawings, four tiers of shelving are shown.

The shelving generally designated at 24 is formed of a wire material which has a bottom section generally indicated at 26 and a front wall section generally indicated at 28, which extends upwardly from the bottom section and is inclined forwardly at an angle with respect to the bottom and then inclines inwardly and upwardly to form a V-shaped upper front end indicated at 30. The bottom section of the wire shelving is formed in any conventional manner and consists of a plurality of longitudinally extending wires 32 of any desired gauge which are suitably secured, as by brazing, welding, or the like, to a plurality of spaced cross-wires 34 in the conventional manner. The cross or transversely extending wires 34 are of a heavier gauge and the rear ends of same curve upwardly and then downwardly to form a hook 36 for engagement with the eyelet members 20 of the clips 18 mounted on the rear legs of the support. The hook 36 terminates in a rearwardly inclined extension 37 which prevents the shelf 24 from inadvertently lifting or releasing at the rear when pressure is applied downward at the front portion of the shelf. A transverse wire 34 should be placed at each end of the shelf.

The front section 28 of the shelf is formed of a plurality of spaced wires 38, the lower ends of which are secured as by welding, brazing, or the like, to the front longitudinal wire 32, which may be of heavier gauge than the other longitudinal wires. The wires 38 extend forwardly and upwardly at an inclined angle and are bent inwardly adjacent the upper end to provide the generally V-shaped front end 30. A heavier gauge longitudinally extending wire 40 forms the top border wire to which the wires 38 are secured. Wire 40 is bent downwardly to form the border sides and connects with lower front heavier gauge longitudinal wire 32. A metal strip 42 extending the length of the shelf is welded to the upper end of the front section 28 and said strip has inwardly extending flanges to receive price tags 44.

The shelf 24 is secured at the rear by the hooks 36 thereof engaging the eyelets 20 on the rear legs 12 of the support. The front of the shelf engages the bracket 22 on the front leg 14. The side 23 of the bracket 22 engages the end transverse wire 34, as best seen in FIGURE 3.

The wire shelf sections 24 just described may be made in any desired lengths, although it is preferred that they be in lengths of three or four feet and each such length will comprise a section or unit of shelving. As shown in FIGURE 1, such a section forming a single shelf is positioned between the two supporting members 10 and is secured thereto as described. It will be noted that all of the sections are of the same length, however, if it is desired to have the shelves in a stepped relation, as shown in FIGURE 2, the width of the shelf, that is, the distance between the front and back of each shelf section is progressively smaller from the bottom shelf to the top shelf. While four shelves are shown, necessitating four different shelving widths, it will be understood that a greater or lesser number of sizes may be

provided, depending upon the number of shelves desired.

The rear leg 12 of each of the tubular supporting members is provided with four rearwardly facing openings. Two openings 46 and 48 are spacedly positioned adjacent the top, and two openings 50 and 52 are spacedly positioned adjacent the bottom. All of the supporting members 10 are identically constructed and may be used interchangeably. These openings are the means to which the bracing rods, to be described, are connected.

In setting up the display and storage units, the supporting members 10 are spaced from each other and bracing rods are secured thereto. The rear bracing rods, each designated by the numeral 54, have their opposite ends bent inwardly to form hooks 56 (FIGURE 4) which are adapted to be inserted in said openings. The bracing rods are all of identical length construction and are interchangeably used. As best seen in FIGURE 5, a pair of bracing rods 54 are secured in an X formation, one of the rods engaging the upper opening 46 of one supporting member 10 and the lower opening 50 of the other supporting member 10. The other bracing rod engages the lower opening 52 of one supporting member and the upper opening 48 of the other supporting member. As seen, if only one section is put up, the two bracing bars shown in FIGURE 5 would be used, leaving the remaining openings free. If other sections are connected at each end of the supporting members 10, other supporting members 10 would be spaced from the members 10 shown in FIGURE 5 and similar bracing rods would be secured thereto. In such case the other bracing rods would be connected to the unused openings, as shown in FIGURE 5. If only two display and storage sections are joined together, then a total of three supporting members are used, the center supporting member serving to connect the two adjacent sections.

The rear wire sections, each generally designated by the numeral 60 are hooked to the supporting members 10. Each rear wire section 60 is formed of a plurality of vertically spaced wire members 62 connected by longitudinally extending wires 64 of heavier gauge in the conventional manner. The opposite ends of the longitudinally extending wires 64 are curved inwardly to provide hooks 66 for engagement with the eyelets 20 of the clips 18 on the rear legs of the supporting members. As best seen in FIGURE 3, the hook 36 of the shelf and the hook 66 of the rear section both engage the same eyelet. For the four shelves there is provided a pair of rear wire sections 60. The upper rear section is positioned rearwardly of the upper two shelves and the lower rear section is positioned rearwardly of the lower two shelves.

The divider or wall generally designated at 68 may serve as a partition or divider, or it may form the end walls of the display unit. They are best shown in FIGURES 2 and 4. All are similarly formed, their width being dependent upon the width of the shelf, that is, the distance between the front and rear of the shelf.

The divider or wall member is preferably a wire member formed of vertically extending spaced wire members 70 of any suitable gauge, secured to a border of peripheral wire member 72 of a heavier gauge which extends across the top, front and bottom and terminates at the bottom rear in a downwardly extending hook portion 74. The divider is of generally rectangular shape.

Extending horizontally forwardly of the front of the divider is a pair of spaced members 76, each of which has a U-shaped hook 78 at the front thereof. The members 76 are brazed or welded to one of the vertical wire members 70 and to the front of the peripheral wire 72. The hooks 78 of members 76 engage with one of the wires 38 forming the front of the shelf. The members 76 are spaced so that the lower hook engages the lower forwardly extending portion of the wire 38, while the upper hook will engage the inwardly bent upper portion of wire 38. The rear hook portion 74 of the divider

snaps over the rear longitudinally extending wire 32 of the bottom section 26 of the shelf to firmly secure the divider to the shelf.

The divider 68 may be secured to the wire shelving along the ends thereof, as shown in FIGURE 3, to form the end walls of the shelving, or same may be secured intermediate the ends anywhere along the length of the section in any desired number, depending upon the bins desired to be formed.

The entire display and bin containers may be readily set up in a minimum of time and readily collapsed to occupy a minimum of storage or shipping space. No separate fastening elements are required. The parts have their own interlocking means and are interlocked and secured together by the proper positioning of parts. This reduces assembly time and reduces costs. The sections may be joined and ganged to other sections to form a display and storage shelving of any continuous length or individual sections may be used.

It will be understood that various changes and modifications may be made from the foregoing without departing from the spirit and scope of the appended claims.

What is claimed is:

1. A display and storage shelving comprising a plurality of supporting members each having spaced front and rear legs, said rear legs having a plurality of spaced clip members each extending laterally thereof and providing an eyelet, said front leg having spaced brackets extending laterally thereof, a shelving member having a base and an upwardly extending front, with said base formed of spaced longitudinal and transverse wires with the opposite end transverse wires having their rear ends bent to form hooks, which hooks are detachably interlocked with said clip members laterally of said rear leg, and with the front end of said base of said shelf detachably secured to said brackets laterally of said front leg so that said shelving is supported by and between said supporting members, said upwardly extending front of said shelf having spaced vertically extending wires which are bent intermediate their ends to form a generally V-shaped front end, a separate back section formed of spaced horizontal wires and a plurality of transverse wires secured at spaced intervals to said horizontal wires, said horizontal wires having their opposite ends bent to form hooks for detachable engagement with said clips on said rear leg laterally of said rear leg, and a divider, said divider comprising spaced horizontal wires and a plurality of transverse wires secured at spaced intervals to said horizontal wires, the bottom said horizontal wire having its end bent to form a hook which is detachably interlocked with one of the longitudinal wires on said base of said shelving, said divider having spaced means extending forwardly thereof for detachable securement to said upwardly extending front of said shelf above and below the intermediate bend of said vertically extending wires.

2. A display and storage shelving comprising at least three supporting members, each having spaced front and rear legs, each leg having attaching means, a plurality of shelf sections having means for detachably interlocking with said attaching means, two of said shelf sections extending between three supporting members with the central supporting member connected to two adjacent shelf sections, a separate back member secured to and between each two supporting members rearwardly of said shelf sections, each of the rear legs of the supporting members having a pair of spaced upper openings and a pair of spaced lower openings, a bracing rod extending diagonally and connected to one of the openings in one of the outer legs and to one of the openings in the central leg, another bracing rod of the same length as the first mentioned bracing rod extending diagonally and connected to an adjacent opening of the pair of openings in the central leg and to an opening in the opposite outer leg whereby the three legs are connected by said pair of bracing rods.

3. A structure defined in claim 2 in which there is a

5

pair of equal length bracing rods extending between each of the outer legs and the central leg and wherein each pair of bracing rods form an X configuration.

4. A display and storage shelving comprising a plurality of supporting members each of a generally inverted U-shape and defining a front and rear leg, said rear leg having a plurality of spaced laterally extending means, a shelving member having a base and an upwardly extending front, with said base formed of spaced longitudinal and transverse wires with the opposite end transverse wires each having their rear ends bent to form hooks which are detachably secured laterally of said rear legs to the laterally extending means on the rear legs and the front portion of the base detachably secured laterally of said front legs to the laterally extending means on the front legs so that said shelving is supported by and between said supporting means, said upwardly extending front of said shelf having spaced vertical wires with outwardly and inwardly inclined portions to form a generally V-shaped configuration, a separate back section formed of spaced horizontal wires and a plurality of transverse wires secured at spaced intervals to said horizontal wires, said horizontal wires having their opposite ends bent to form hooks for detachable engagement with said clips on said rear legs, and a divider, said divider comprising spaced horizontal wires and a plurality of transverse wires secured at spaced intervals to said horizontal wires, the bottom said horizontal wire having its end bent to form a hook which is detachably interlocked with one of the longitudinal wires on said base of said shelving, said divider having a pair of means extending forwardly thereof for detachable securement to said upwardly extending front of said shelf, with one of said means secured to said outwardly extending portion and the other to said inwardly inclined portion.

5. A display and storage shelving comprising, three supporting members for supporting shelves adjacent each other, each supporting member having spaced front and rear legs, said rear legs having a plurality of spaced clip members each extending laterally thereof and providing an eyelet which extends on the opposite sides of the rear leg so that the central supporting member can be detachably engaged by the adjacent shelves, said front leg having spaced brackets extending laterally thereof, a shelving member having a base and an upwardly extending front, with said base formed of spaced longitudinal and transverse wires with the opposite end transverse

6

wires having their rear ends bent to form hooks, which hooks are detachably interlocked with said clip members laterally of said rear leg and with the front end of said base of said shelf detachably secured to said brackets laterally of said front leg so that said shelving is supported by and between said supporting member, a separate back section formed of spaced horizontal wires and a plurality of transverse wires secured at spaced intervals to said horizontal wires, said horizontal wires having their opposite ends bent to form hooks for detachable engagement with said clips on said rear leg laterally of said rear leg, each of the rear legs of the supporting members having a pair of spaced upper openings and a pair of spaced lower openings, a bracing rod extending diagonally across the rear of the back section and secured in one of said upper openings in one of said legs and in one of the lower openings in the central leg, and a second bracing rod of the same length of the first bracing rod, said second bracing rod extending diagonally between said central leg and an opposite adjacent leg and detachably secured in the free openings in said legs to lock the adjacent shelving sections to each other.

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