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(54) DISPLAY RACKS AND METHODS OF USE THEREOF

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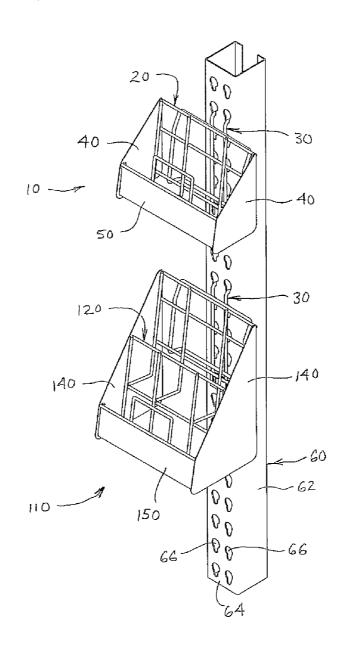
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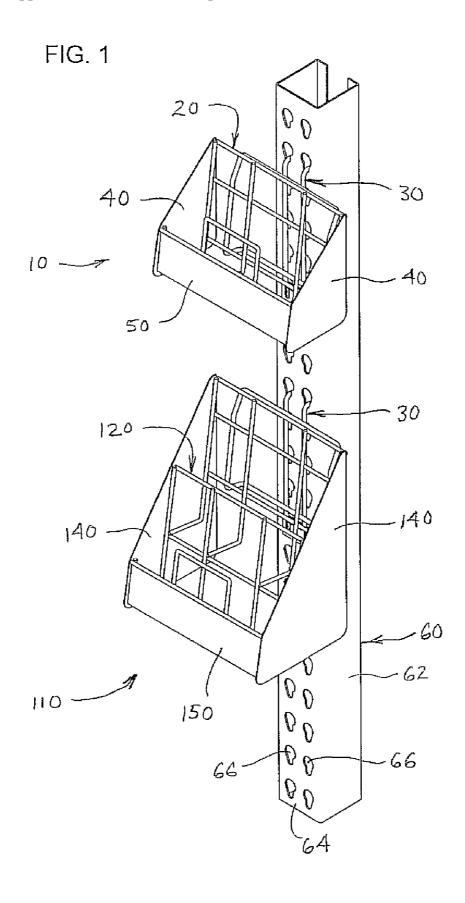
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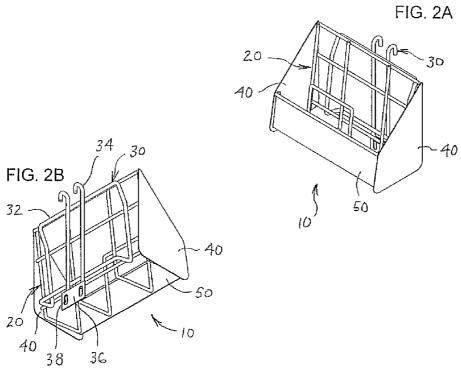
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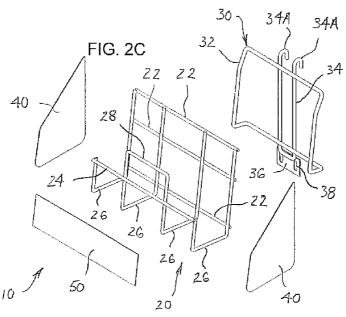
(57) ABSTRACT

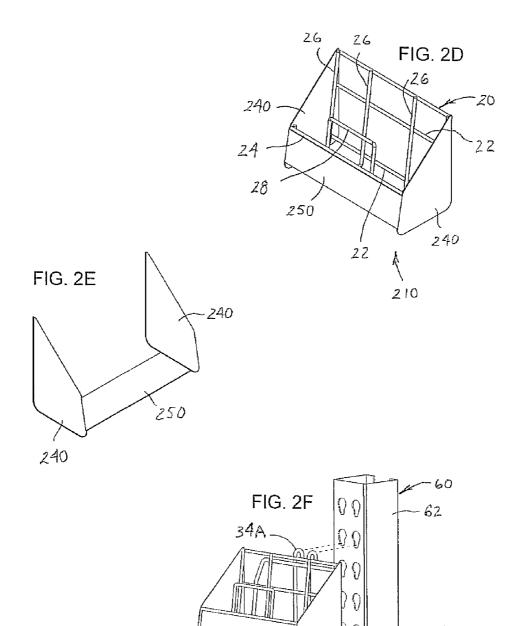
Racks for use in point of purchase displays of goods and methods of using the same are disclosed. The racks may be suspended from a generally vertical surface or placed on a generally horizontal surface.











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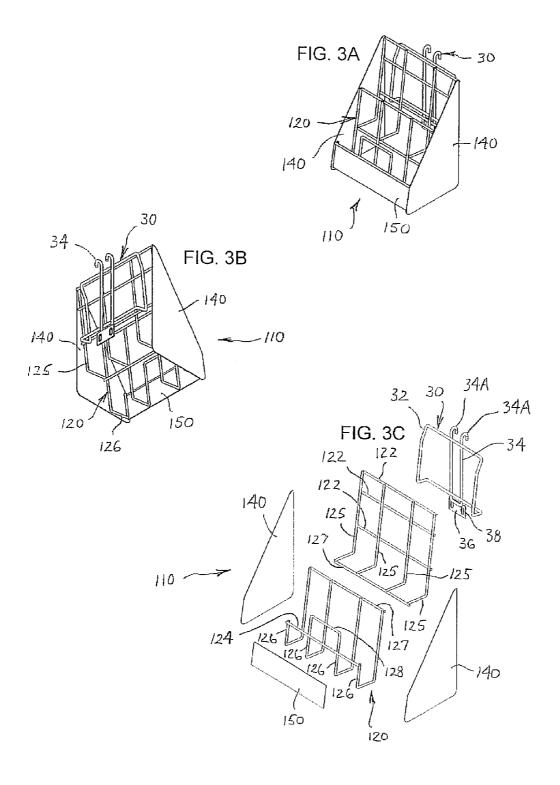
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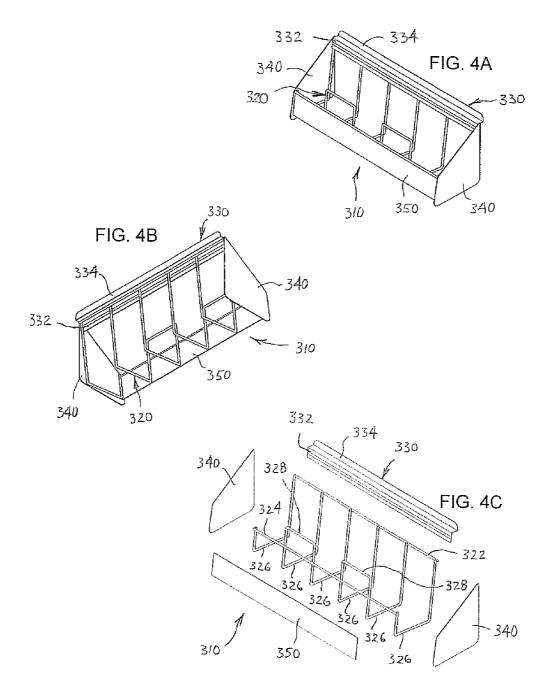
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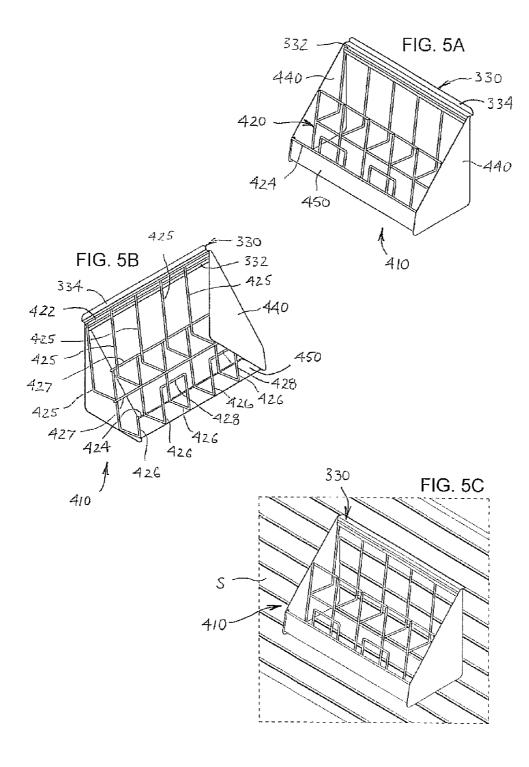
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DISPLAY RACKS AND METHODS OF USE THEREOF

FIELD OF THE DISCLOSURE

[0001] This disclosure relates generally to racks for displaying objects and, more particularly, to racks used for point of purchase displays of goods and methods of using the same.

BACKGROUND

[0002] It is common to display goods within a retail environment on shelves, countertops or on racks. Racks have been available for display purposes in various forms, such as those made of wire, plastic, wood or the like. Racks also have been configured for use on top of flat surfaces, as well as to be hung from vertically oriented surfaces such as slatwalls, pegboards or the like.

[0003] The present disclosure addresses the issue of retail merchandising space being inherently limited, while providing enhanced, low cost racks for stand alone display of goods, as well as for display of goods that are associated with other goods that are present within a larger display. The disclosure also addresses the need of retailers for flexibility in arranging point of purchase displays to best utilize merchandising space, and to quickly and conveniently adapt displays to changing needs.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] FIG. 1 is a perspective view of first and second example racks connected to a stanchion for use in point of purchase displays.

[0005] FIG. 2A is a front, upper perspective view of the first example rack shown in FIG. 1.

[0006] FIG. 2B is a rear, lower perspective view of the first example rack shown in FIG. 1.

[0007] FIG. 2C is an exploded perspective view of the first example rack shown in FIG. 1.

[0008] FIG. 2D is a front, upper perspective view of a third example rack.

[0009] FIG. 2E is a rear, lower perspective view of the front and side members of the third example rack shown in FIG.

[0010] FIG. 2F is an exploded perspective view of the connection of the first example rack shown in FIG. 1 to the stanchion.

[0011] FIG. 3A is a front, upper perspective view of the second example rack shown in FIG. 1.

[0012] FIG. 3B is a rear, lower perspective view of the second example rack shown in FIG. 1.

[0013] FIG. 3C is an exploded perspective view of the second example rack shown in FIG. 1.

 $\boldsymbol{[0014]}$ FIG. $\boldsymbol{4}\boldsymbol{A}$ is a front, upper perspective view of a fourth example rack.

[0015] FIG. 4B is a rear, lower perspective view of the fourth example rack shown in FIG. 4A.

[0016] FIG. 4C is an exploded perspective view of the fourth example rack shown in FIG. 4A.

 $\boldsymbol{[0017]}\quad \mathrm{FIG.\,5A}$ is a front, upper perspective view of a fifth example rack.

[0018] $\,$ FIG. 5B is a rear, lower perspective view of the fifth example rack shown in FIG. 5A.

[0019] FIG. 5C is a perspective view of the fifth example rack connected to a slatwall for use in point of purchase displays.

DETAILED DESCRIPTION

[0020] Although the following discloses example racks for use in point of purchase displays that involve placement on flat surfaces, such as a desk, countertop or shelf, or suspending from generally vertical structures, such as slatwalls or stanchions, persons of ordinary skill in the art will appreciate that the teachings of this disclosure are in no way limited to such specific embodiments. On the contrary, it is contemplated that the teachings of this disclosure may be implemented in alternative configurations and environments. For example, although the example racks described herein are described in conjunction with configurations for displaying literature, such as books or periodicals, those having ordinary skill in the art will readily recognize that the example racks may be used for display of other types of goods and may be configured to correspond appropriately to the goods to be displayed, whether requiring additional containment, support or other features.

[0021] Similarly, the disclosed examples may be used in any type of format to contain and display goods. Thus, the methods, apparatus, and/or articles of manufacture disclosed herein may be advantageously adapted to enhance or improve the organization, display or dispensing of any type of goods. Accordingly, while the following describes example racks and methods of use thereof, persons of ordinary skill in the art will readily appreciate that the disclosed examples are not the only way to implement such racks and/or methods.

[0022] In general, the example racks and/or methods described herein facilitate convenient and cost effective point of purchase display of goods. In some examples, the racks may be placed on generally horizontal surfaces, such as is provided by a desk, countertop, shelf or the like. In other examples, the racks are intended to be hung from substantially vertical surfaces, such as a stanchion, pegboard, slatwall or the like.

[0023] A first example rack 10 is illustrated in FIGS. 1, 2A-2C and 2F. The illustrated example rack 10 includes a frame 20, a hanger assembly 30, side panels 40 and a front panel 50.

[0024] The frame 20 comprises rear wall members 22, a front wall member 24, and upright members 26 which are generally U-shaped. In the illustrated example, the two centrally located upright members 26 are connected by a front guard portion 28. Front guard portion 28 may be included to help contain taller or less rigid goods, such as periodicals or promotional materials, while still including spaces along the front of rack 10 for permitting users to easily grasp and remove items from the rack.

[0025] The upright members 26 are spaced apart horizontally across the width of the rack 10, with a pair of outermost upright members providing sides of the frame 20. The rear wall members 22 are spaced apart vertically, and generally are located in a common plane, although they need not be. The rear wall members 22 also are connected to rear portions of the upright members 26. The front wall member 24 is connected to front portions of the upright members 26. In this example, the front guard portion 28 is illustrated as an integral portion of a continuous piece that also forms two centrally located upright members 26. Also, in this example, the components of the frame 20 are illustrated as a being formed from

wire segments, which may be joined by welding or via fasteners or the like. It will be appreciated that such segments alternatively may be formed from butt welded or lapped shorter segments. Moreover, the frame may be constructed of other materials and may be joined by suitable means therefore. For instance, the frame could be molded, from plastic, metal or the like, in which event the various components would be connected via their integrally formed structure. The components could be formed of plastic or other materials, and in shapes other than rods, such as flat bands, and connected via fasteners, welding, adhesives or the like. Thus, one of ordinary skill in the art will readily appreciate that other materials and methods of manufacture may be employed.

[0026] As shown in the example, a pair of side panels 40 and a front panel 50 are connected to the frame 20. In this example, the side panels 40 and front panel 50 are constructed of sheet metal, and are joined to the frame 20 by welding. The panels 40, 50 provide some closure for the ends and the front of the frame 20, which assists in retaining goods placed within the rack 10. Advantageously, a single side panel configuration may be used at both ends of the example rack, simplifying manufacture, and permitting common side panels 40 to be used for different length racks as well. Accordingly, different length racks can be formed by assembling a frame with longer front and rear wall members 22, 24, and potentially additional upright members 26, while using the common side panels 40 and a front panel 50 of an appropriate corresponding length.

[0027] In addition, this particular configuration is structurally advantageous, as the side panels 40 and front panel 50 provide a stabilizing affect to the outer-most U-shaped upright members 26, which in turn is transmitted to the more centrally located upright members 26 by way of the connection of all of the upright members 26 to the rear wall members 22 and the front wall member 24. Thus, by strategic and efficient use of fairly inexpensive wire and sheet metal, or alternative relatively rigid materials, a relatively strong and rigid rack 10 may be formed, and may include connecting means that permit rapid deployment or reconfiguration of point of purchase displays.

[0028] In the example rack 10, the hanger assembly 30 is illustrated as comprising a base 32, hook member 34 and a mounting tab 36. In this example, the base 32 is configured to provide a broad format for connection to the rear of the frame 20, such as by welding to the rear wall members 22, although a narrower configuration may be used. The hook member 34 provides a means for attachment to a generally vertical structure having apertures therein, such as the stanchion 60 shown in FIGS. 1 and 2F. The stanchion 60 includes a C-shaped channel 62 having a generally vertical front surface 64. The front surface 64 of the stanchion 60 includes a pattern of apertures 66 therethrough. In this example, the stanchion 60 is of the type that would be found in the corner of large platforms used for storing and displaying goods at large home center stores or the like. The pattern of apertures 66 in this example includes a series of pairs of holes having a generally circular portion 66A from which a smaller slotted portion 66B extends downward. The patterns of apertures and surfaces from which the rack 10 may be suspended can vary, and may also include variations, for example, such as hanging over an upper edge of a panel, hanging from an elongated horizontal slot, or from structures such as peg boards or the [0029] The hook member 34 of the present example includes two hook portions 34A at upper ends of a U-shaped member. The base 32 and hook member 34 may be formed and connected together in manners similar to those described above with respect to the frame 20, and are shown, for example, as being constructed of welded wire segments. The base 32 also is illustrated as being non-planar, and includes an angled mounting approach that provides for some stand-off distance between the frame 20 and the stanchion 60. This facilitates presentation of goods spaced from the vertical surface. This may be advantageous when attempting to place goods in a more prominent position, such as extending outward into an isle. This also allows light to pass through the open back of the rack 10. It will be appreciated by one of ordinary skill in the art that if desired, a rear panel may be added to further enclose rack 10.

[0030] The mounting tab 36 has slotted apertures 38 and is connected to the lower end of the hook member 34. In this example, the mounting tab 36 is formed from flat metal and is connected to the hook member 34 by suitable means, such as welding, but it will be appreciated by one of skill in the art that as with the other components, the mounting tab may be formed of other materials, in other configurations, and connected by other suitable means. Further, the hanger assembly 30 in the present example is shown as having multiple components and being connected to the frame 20 in a particular manner. However, it will be appreciated that the rack 10 may be formed in alternative ways, and that the hanger assembly 30 may be incorporated more directly or integrally into the frame.

[0031] The example rack 10 may be suspended by simply inserting the upper ends of hook member 34 into the apertures 66 in the stanchion 60 and then moving the rack 10 downward, thereby moving the hook portions 34A downward until seated in the slotted extensions 66B of the apertures 66. In this instance the mounting tab 36 may not be needed, or if present, will provide a contact point against the stanchion 60 for the lower portion of the rack 10.

[0032] However, the mounting tab 36 may be used to provide enhanced security or to simply more firmly hold the rack 10 in place. This may be accomplished by use of additional fasteners, such as screws 70 and threaded locking tabs 72, shown in FIG. 2F. Thus, for more secure mounting, screws 70 may have their threaded portions inserted through slotted apertures 38 in the mounting tab 36 and be threaded into locking tabs 72. Then, the rack 10 may be moved into a position whereby the locking tabs 72 are inserted through the apertures 66 in the stanchion 60. The rack 10 then may be moved slightly upward to permit the upper hook portions 34A of hook member 34 to be inserted through additional apertures 66 at a higher location along the stanchion 60. Next, the rack 10 may be permitted to move downward until the hook portions 34A become seated in the slotted extensions 66B of the upper apertures 66. Finally, the screws 70 may be tightened to removably fix mounting tab 36, and thereby the rack 10, into position along the stanchion 60.

[0033] FIG. 1 also includes a second example rack 110, which is further illustrated in FIGS. 3A-3C. This second illustrated example rack 110 includes a frame 120, a hanger assembly 30, side panels 140 and a front panel 150.

[0034] The frame 120 of this example is two-tiered, having rear wall members 122, a front wall member 124, generally L-shaped upper upright members 125, generally U-shaped lower upright members 126, and intermediate wall members

127. As with the first example, the centrally located upright members 126 are connected by a front guard portion 128. The various segments of the frame 120, side panels 140, and front panel 150 may be fabricated and connected in manners similar to those used for the rack 10 described above, although this example includes the connection of the upper upright members 125 to the lower upright members 126 via an intermediate wall member 127 and the mutual connection to the side panels 140. Note however that while it is structurally advantageous, the upper and lower upright members need not necessarily be mutually connected to an intermediate wall member 127. Also, additional upper upright members 125 and intermediate wall members 127 may be added to form multitiered racks having alternative numbers of tiers, with corresponding suitably formed side panels, as desired.

[0035] Example rack 110 is shown as including a hanger assembly 30, as above described. Indeed, the large base 32 permits universal use of the hanger assembly 30 with singletiered racks 10 or multi-tiered racks, such as the rack 110. The hanger assembly 30 is used to mount the rack 110 to a generally vertical surface having apertures therethrough in essentially the same manner as described above with respect to the rack 10. It will be appreciated by those of ordinary skill in the art that the use of single-tiered racks or multi-tiered racks may be more or less advantageous in particular merchandising environments, and that such racks may be used together in formats, such as is shown in FIG. 1, or placed one behind the other in tiered displays on a horizontal surface. Also, due to its added height, the example rack 110 with the hanger assembly 30 may advantageously be used for placement on top of a desk, countertop, shelving or other generally horizontal surface, such as to hold books or periodicals that relate to associated nearby goods.

[0036] A further example rack 210 is shown in FIGS. 2D and 2E. This third example rack 210 has a frame 20 similar to that of the first example, including rear wall members 22, a front wall member 24, upright members 26 which are generally U-shaped, with the centrally located upright members 26 being connected by a front guard portion 28. However, this example differs from the first example rack 10 in two main respects. First, the rack 210 includes side panels 240 and a front panel 250 which are directly connected together. In this example, they are connected by being formed from a continuous sheet, although they could otherwise be formed separately and then the side panels 240 could be connected directly to the front panel 250, such as by welding or other suitable means, prior to or during their connection to frame 20. Second, the rack 210 does not include a hanger assembly. Thus, the rack 210 is specifically configured to rest on the bottom edge of the side panels 240 and/or on such bottom edges along with the bottom of the frame 20. This example is useful in settings calling for placement of the rack 210 on top of a generally horizontal surface, as previously described. While the rack 210 is shown in a single-tier format, it will be appreciated that the use of racks without a hanger assembly 30 is contemplated in both single-tier and multi-tier formats, regardless of whether or not the side panels are directly connected to the front panel. Also, in this example as well as the others disclosed herein, the frame may be connected to the side panels at an angle with the intention of tilting the product backward for increased organization and containment of less rigid articles for display.

[0037] Turning to FIGS. 4A-4C, a fourth example rack 310 is shown. This illustrated example includes a frame 320, a

hanger assembly 330, side panels 340 and a front panel 350. The basic structure of this example rack 310 differs from the example rack 10 in that it is provided in a wider format, and is provided with a hanger assembly 330 equipped to be suspended from a slatwall. Accordingly, the frame 320 comprises a rear wall member 322, a front wall member 324, and upright members 326 which are generally U-shaped. In this illustrated example, there are two pair of centrally located upright members 326 that each are connected by a front guard portion 328, and two outermost upright members 326. The upright members 326 are spaced apart across the width of the rack 310, with an outermost pair of upright members 326 providing sides to the frame 320. The rear wall member 322 is located at the top of the rear wall, is connected to rear portions of the upright members 326, and is further connected to a hanger assembly 330. The front wall member 324 is connected to front portions of the upright members 326. In this example, the front guard portions 328 are illustrated as an integral portion of each of the continuous pieces that also form the two centrally located pairs of upright members 326. The components of the frame 320 are illustrated as being formed from similar materials and connected in similar ways to the components described above with respect to the first example rack 10.

[0038] The example rack 310 further includes a pair of side panels 340 and a front panel 350 that are connected to the frame 320 in a manner similar to that of the example rack 10. In the example rack 310, the hanger assembly 330 is illustrated as comprising a base 332 and a hook member 334. In this example, the base 332 and hook member 334 are formed from a single bent section of sheet metal, although it will be appreciated that one or more pieces may be used to form a hanger assembly. The base 332 is bent to permit the base to be connected to the rear wall member 322, and it also may be connected to the upper end of the upright members 326. The hook member 334 is bent to provide a hanger that may be inserted and suspended from a slotted wall S, as shown with a further example in FIG. 5C. However, by using the hanger assembly 330 of the fourth illustrated example, the example rack 310 advantageously may be used both in a hanging format, as well as in a free-standing format, as described with respect to the example rack 210 shown in FIGS. 2D and 2E. [0039] In FIGS. 5A-5C, a fifth example rack 410 is shown.

This illustrated example includes a frame 420, a hanger assembly 430, side panels 440 and a front panel 450. The basic structure of this example rack 410 differs from the example rack 310 in that it is provided in a two-tiered format. Thus, example rack 410 has a rear wall member 422, a front wall member 424, generally L-shaped upper upright members 425, generally U-shaped lower upright members 426, and intermediate wall members 427. As with the fourth example rack 310, the two pair of centrally located upright members 426 are each connected by a front guard portion 428. The various segments of the frame 420, side panels 440, and front panel 450 may be fabricated and connected in manners similar to those used for any of the preceding frames 10, 110, 210, and 310 described above, although this example includes the connection of the upper upright members 425 to the lower upright members 426 via an intermediate wall member 427 and the mutual connection to the side panels 440. Note however that while it is structurally advantageous, the upper and lower upright members 425, 426 need not necessarily be mutually connected to an intermediate wall member 427. Also, additional upper upright members 425 and intermediate wall members 427 may be added to form multi-tier racks having alternative numbers of tiers, with corresponding suitably dimensioned side panels, as desired.

[0040] The example rack 410 is shown as including a hanger assembly 330, as above described with reference to the fourth example rack 310. Thus, the example rack 410 similarly may be placed on a generally horizontal surface, or may be suspended from a slatwall S, as is shown in FIG. 5C. As with the above-described example racks, it will be appreciated by those of ordinary skill in the art that the use of single-tier racks or multi-tier racks may be more or less advantageous in particular merchandising environments, and that such racks may be used together in vertically oriented formats, such as is shown in FIG. 1, or placed one behind the other in tiered displays.

[0041] While the present disclosure shows and demonstrates various example racks 10, 110, 210, 310, 410 that are adapted for use in point of purchase displays of goods, these examples are merely illustrative and are not to be considered limiting. It will be apparent to those of ordinary skill in the art that various racks and structures on which racks may be placed or from which racks may be suspended can be constructed without departing from the scope or spirit of the present disclosure. Thus, although certain example methods, apparatus and articles of manufacture have been described herein, the scope of coverage of this patent is not limited thereto. On the contrary, this patent covers all methods, apparatus and articles of manufacture fairly falling within the scope of the appended claims either literally or under the doctrine of equivalents.

What is claimed is:

- 1. A display rack comprising:
- a frame having at least one rear wall member, at least one front wall member and at least two upright members connected to the at least one rear wall member and the at least one front wall member;

the frame having opposed ends;

- at least one side panel connected to each of the respective opposed ends of the frame; and
- a front panel connected to the frame.
- 2. The display rack as defined in claim 1, wherein the display rack further comprises a hanger assembly connected to the frame.
- 3. The display rack as defined in claim 2, wherein the hanger assembly further comprises at least one hook member.
- **4**. The display rack as defined in claim **2**, wherein the hanger assembly further comprises a base that is connected to the frame.
- 5. The display rack as defined in claim 4, wherein the hanger assembly further comprises at least one hook member connected to the base.
- **6**. The display rack as defined in claim **3**, wherein the at least one hook member further comprises at least one hookshaped portion at an upper end of the at least one hook member.
- 7. The display rack as defined in claim 3, wherein the at least one hook member further comprises at least one sheet portion adapted for insertion into a slatwall.
- **8**. The display rack as defined in claim **2**, wherein the hanger assembly further comprises a mounting tab.
- 9. The display rack as defined in claim 2, wherein the hanger assembly further comprises fasteners adapted for connection to a planar surface having apertures therein.

- 10. The display rack as defined in claim 1, wherein the frame comprises a single display tier.
- 11. The display rack as defined in claim 1, wherein the frame comprises a plurality of display tiers.
- 12. The display rack as defined in claim 1, wherein the frame further comprises at least one front guard member extending upward from said front wall member.
 - 13. A method of forming a display rack comprising: forming a frame having two opposed ends by connecting a plurality of upright members to at least one rear wall member and at least one front wall member;
 - connecting at least one side panel to each of the respective opposed ends of the frame; and

connecting a front panel to the frame.

- 14. A method as defined in claim 13, wherein connecting a plurality of upright members to at least one rear wall member and at least one front wall member further comprises connecting wire segments by welding.
- 15. A method as defined in claim 13, wherein connecting at least one side panel to each of the respective opposed ends of the frame further comprises forming at least two side panels from sheet metal and welding the respective side panels to the opposed ends of the frame.
- 16. A method as defined in claim 13, wherein connecting a front panel to the frame further comprises forming a front panel from sheet metal and welding the respective side panels to the frame.
- 17. A method as defined in claim 13, further comprising connecting a hanger assembly to the frame.
- 18. A method as defined in claim 13, wherein connecting a hanger assembly to the frame further comprises forming a hanger assembly from wire segments and/or sheet metal and welding the hanger assembly to the frame.
- 19. A method of arranging a display rack for a point of purchase display comprising:
 - positioning adjacent a structural member having a vertical surface and having apertures therein a first rack having a frame, a pair of side members, and a hanger assembly having a hook member;
 - inserting at least a portion of the hook member through at least one of the apertures and allowing the first rack to be suspended by the structural member.
- 20. A method as defined in claim 19, wherein the display rack further comprises a mounting tab connected to the first rack and at least one fastener and the method further comprises removably connecting the mounting tab to the structural member via the at least one fastener.
 - 21. A method as defined in claim 19, further comprising: positioning adjacent the structural member at least a second rack having a frame, a pair of side members, and a hanger assembly having a hook member;
 - inserting at least a portion of the hook member of the second rack through at least one of the apertures and allowing the second rack to be suspended by the structural member.
- 22. A method as defined in claim 21, wherein the first rack and the second rack are each single-tiered.
- 23. A method as defined in claim 21, wherein at least one of the first rack and the second rack is multi-tiered.
- 24. A method as defined in claim 21, wherein at least one of the first rack and the second rack is single-tiered and the other of the first rack and the second rack is multi-tiered.

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