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(54) ADJUSTABLE SHELF SYSTEM

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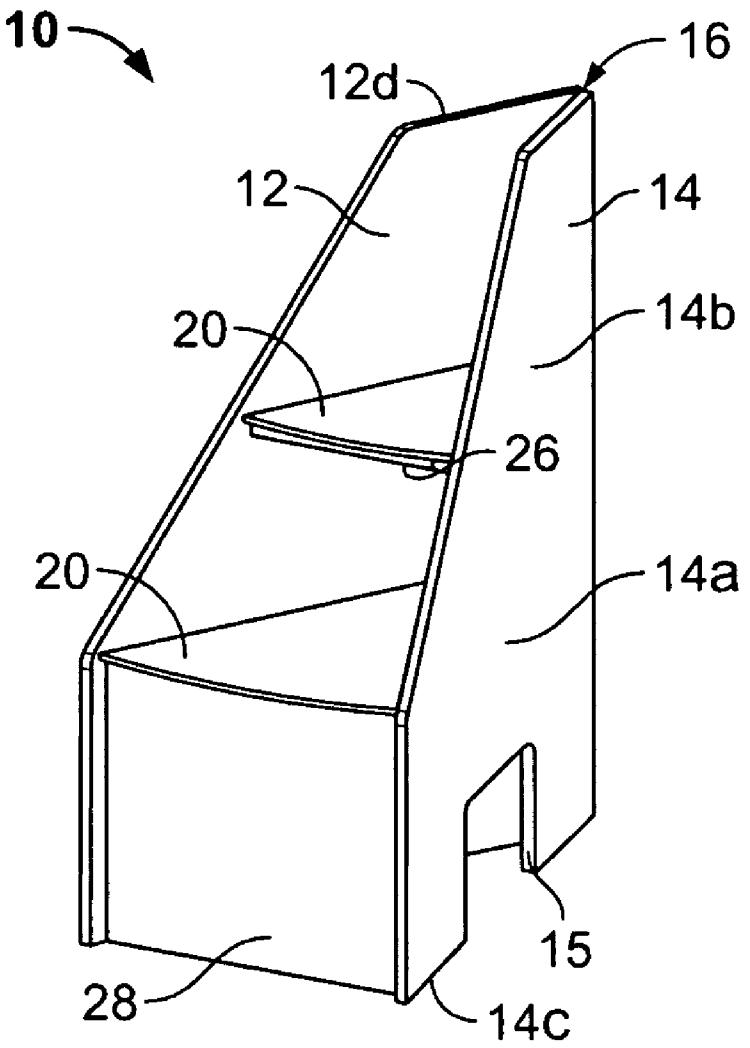
(52) **U.S. Cl.** **211/150**

(57) **ABSTRACT**

A shelf system comprises first and second side members, a hinge and a shelf. The side members have front and rear portions. The rear portions are hingedly connected to each other or a third panel by at least one hinge having a hinge axis. The shelf is expandable and extends between the first and second side members. The shelf is adapted to laterally expand when the first side member is rotated about the hinge axis away from the second side member. A method of using the shelf system is also disclosed.



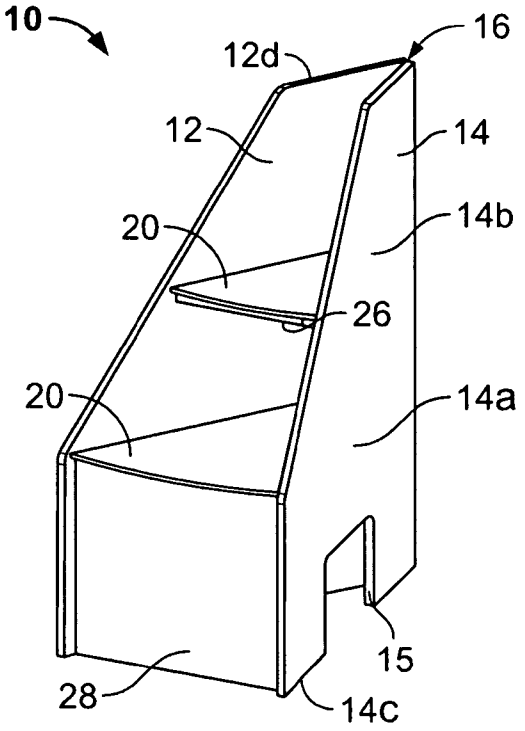

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FIG. 1

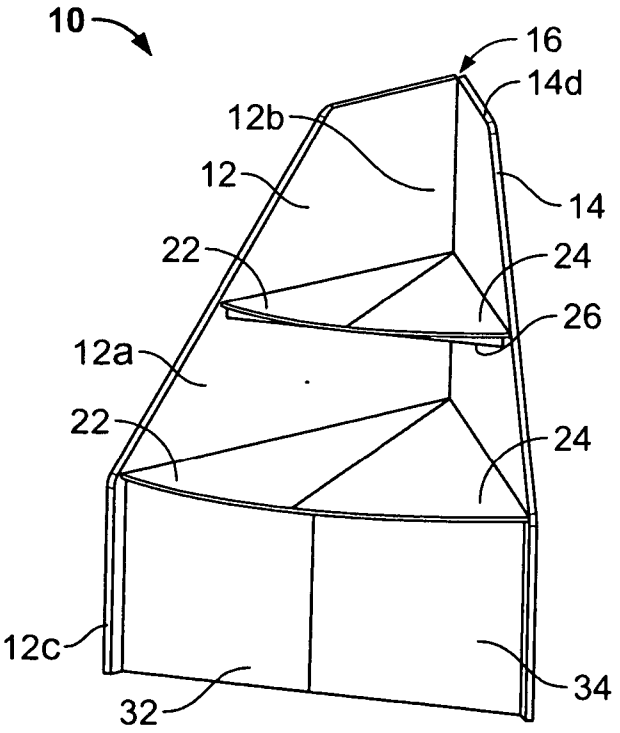
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FIG. 2

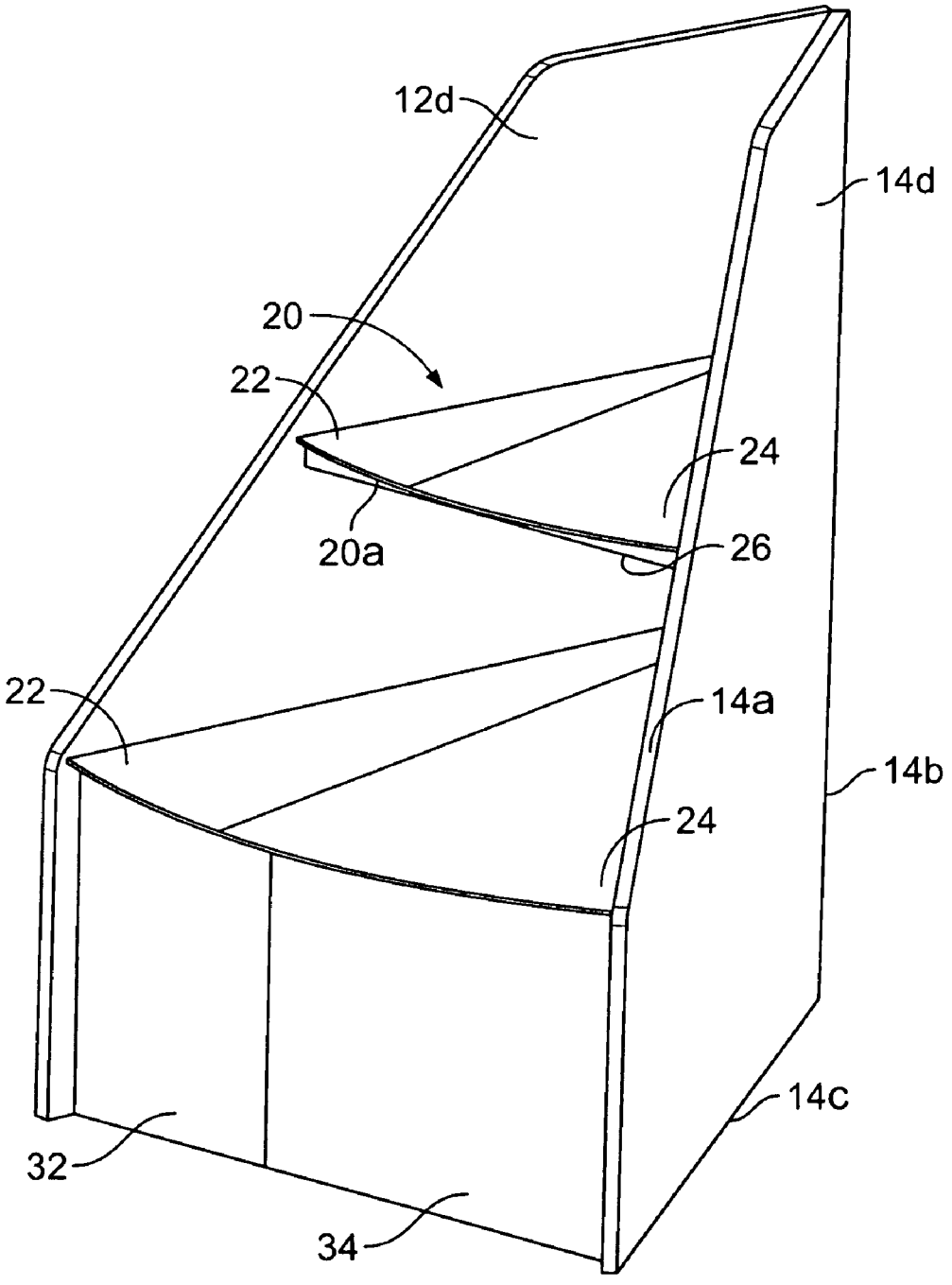


FIG. 3

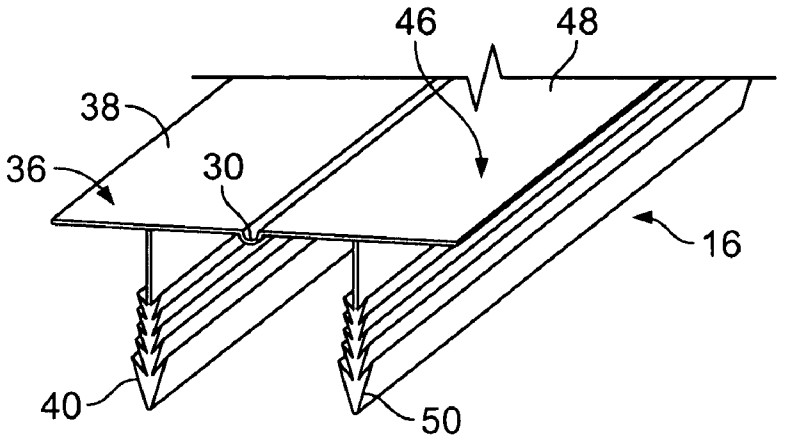


FIG. 4

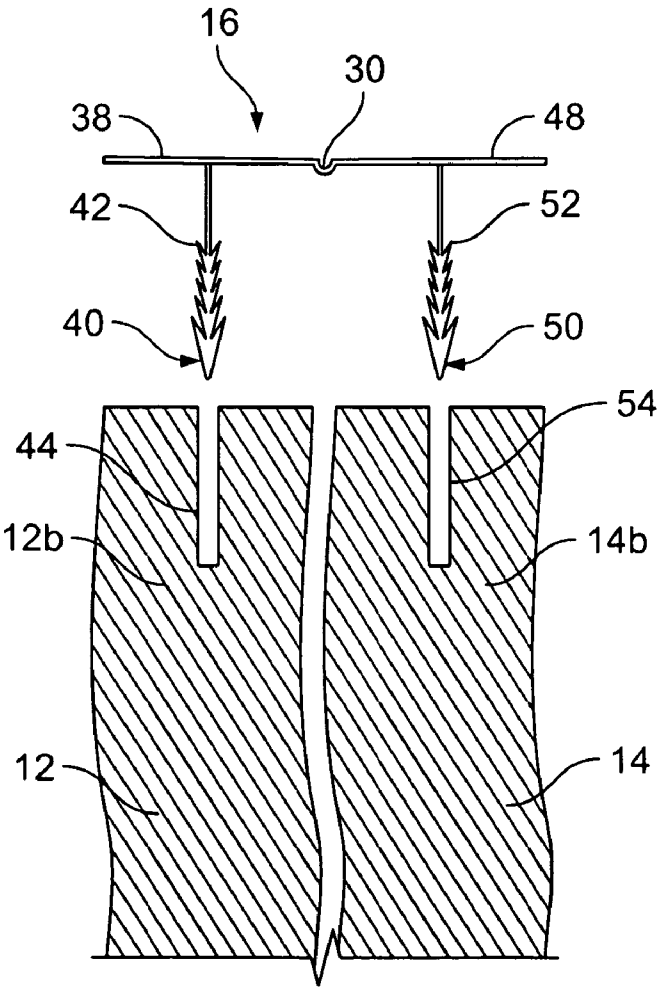


FIG. 5

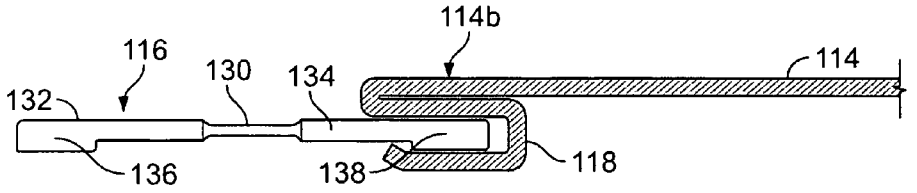
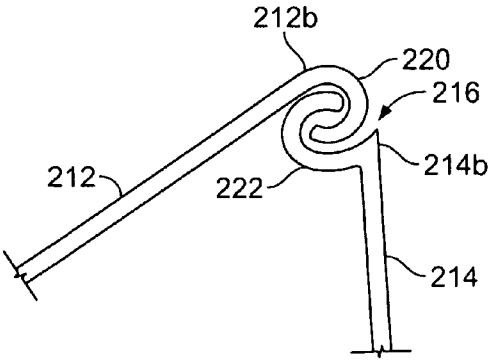


FIG. 6



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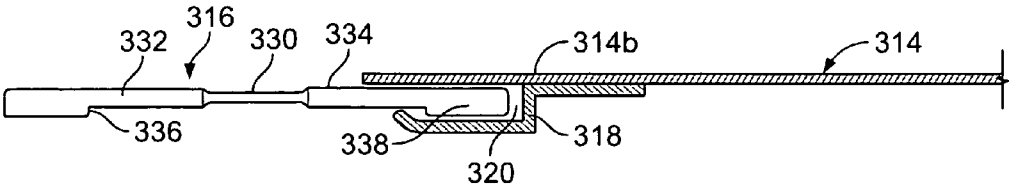
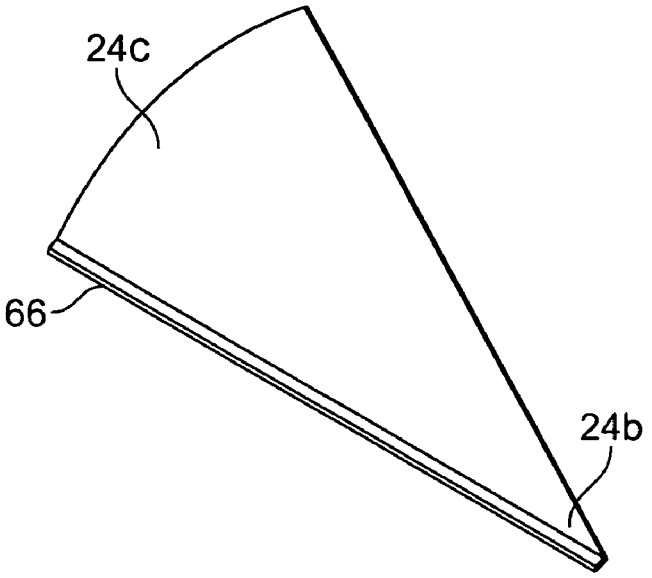


FIG. 8



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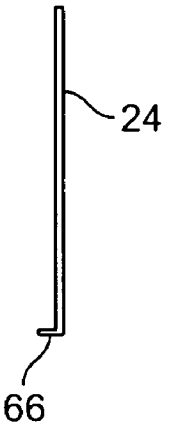
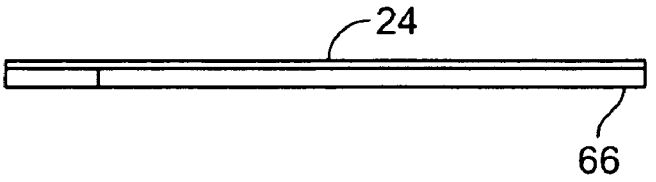


FIG. 10



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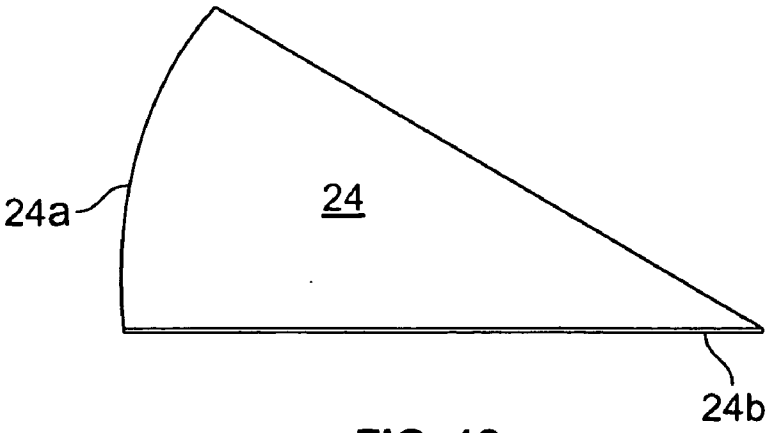

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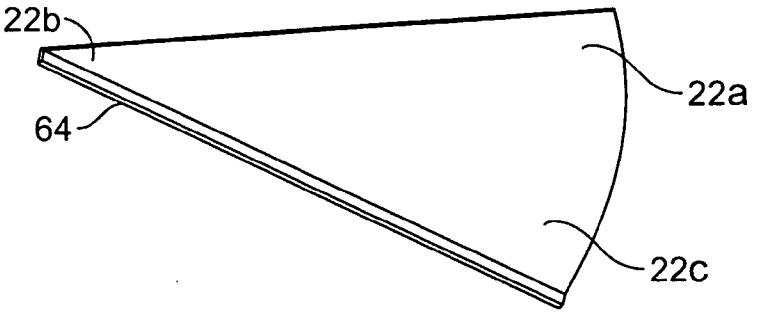
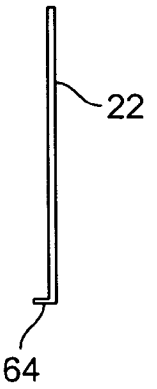


FIG. 13



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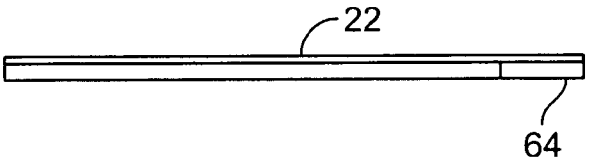

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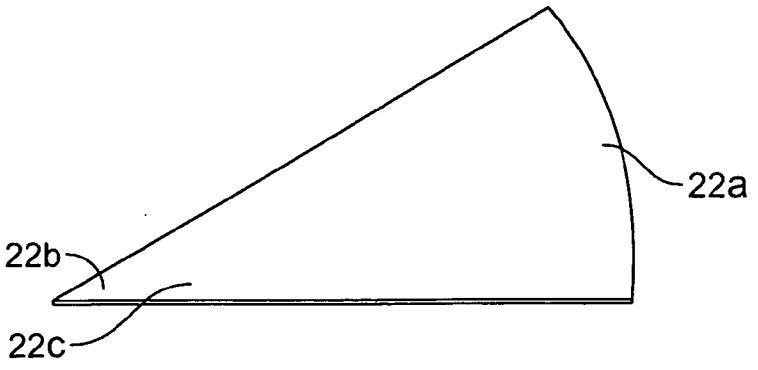

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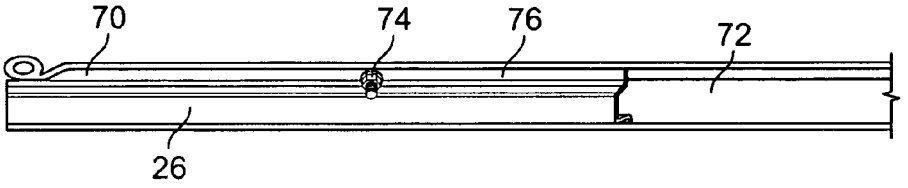

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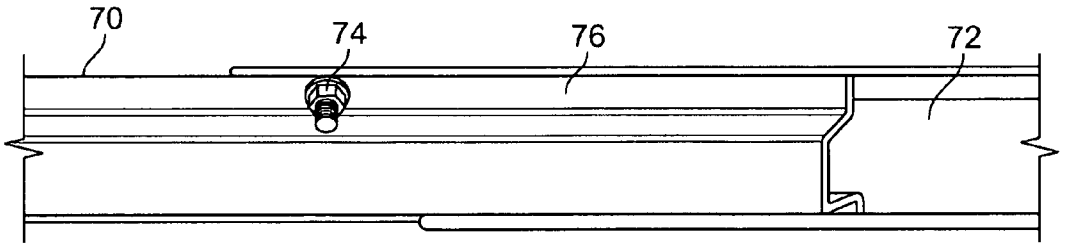

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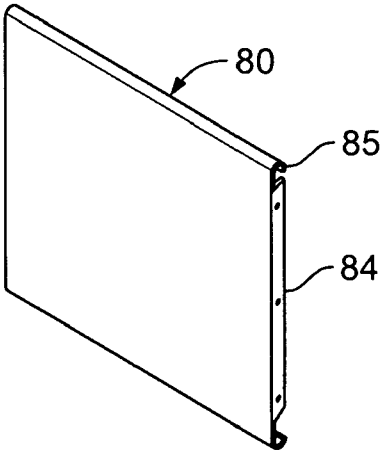

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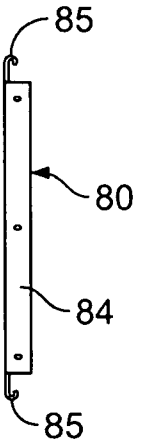

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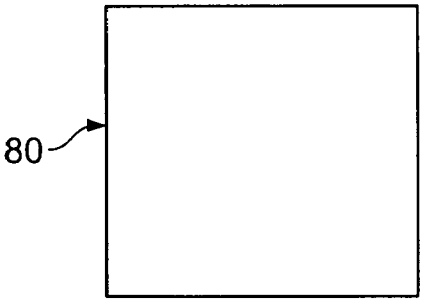

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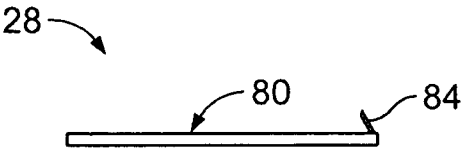

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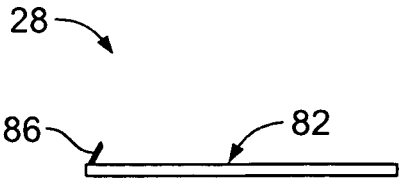

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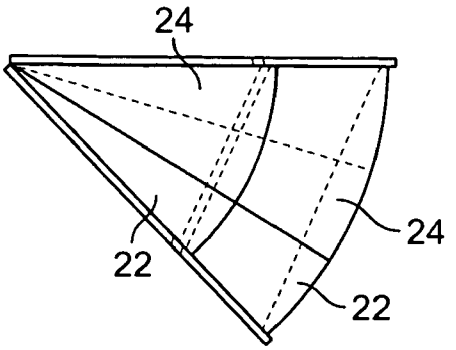

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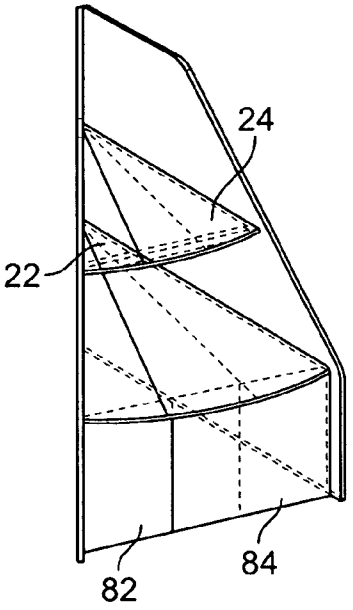

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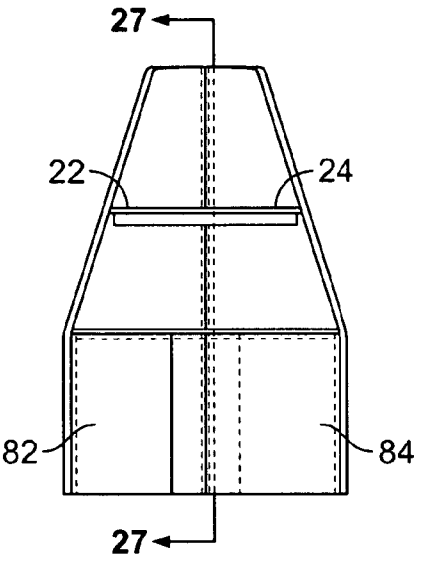

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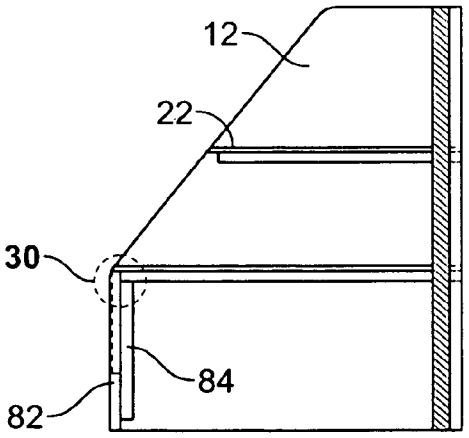

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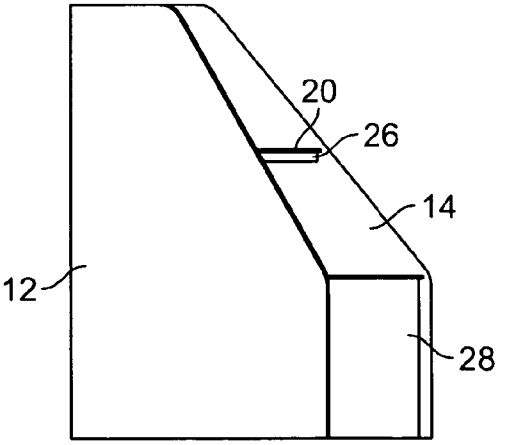
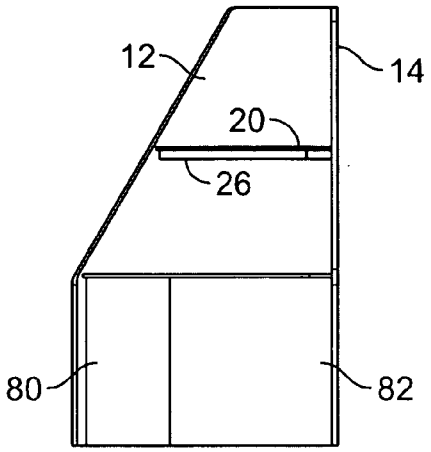


FIG. 28



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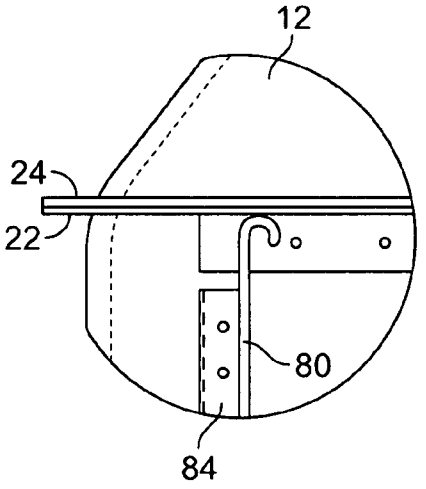

FIG. 30

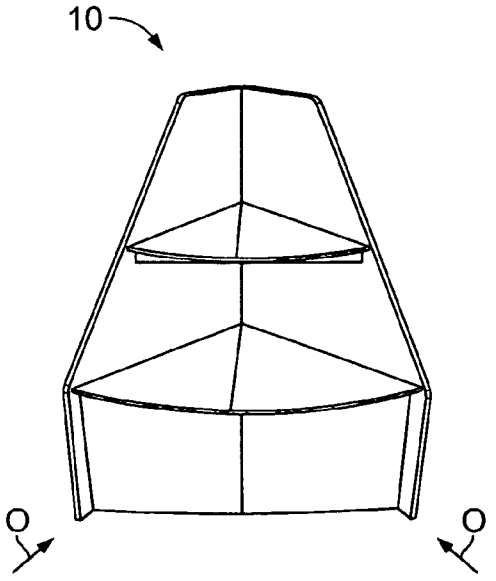

FIG. 31

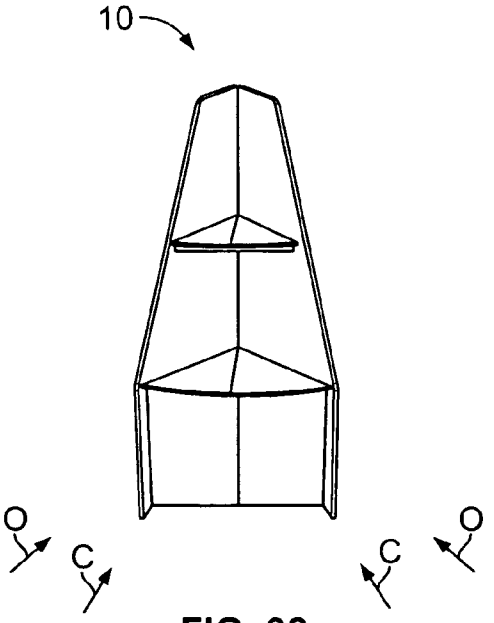

FIG. 32

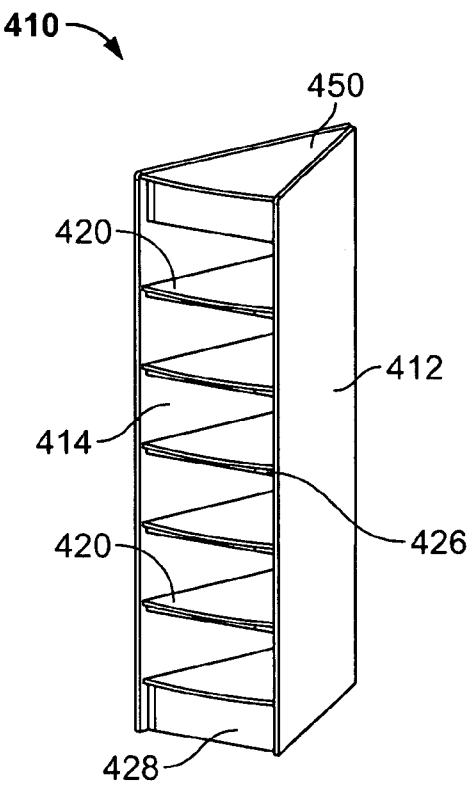
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FIG. 33

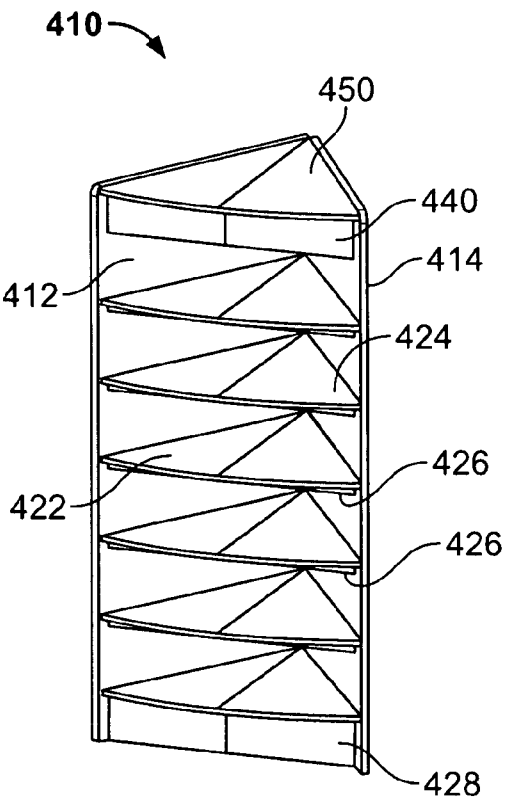
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FIG. 34

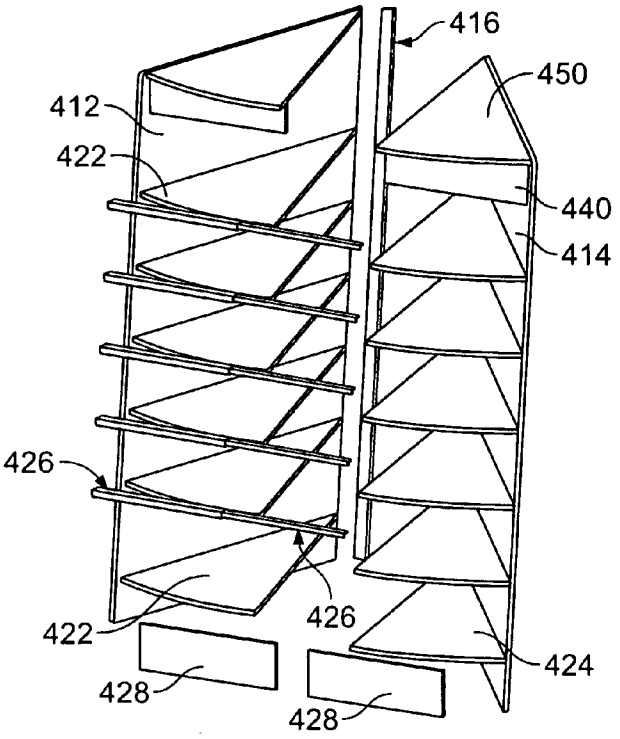

FIG. 35

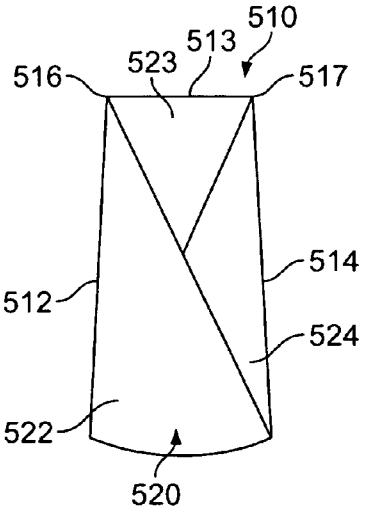

FIG. 36

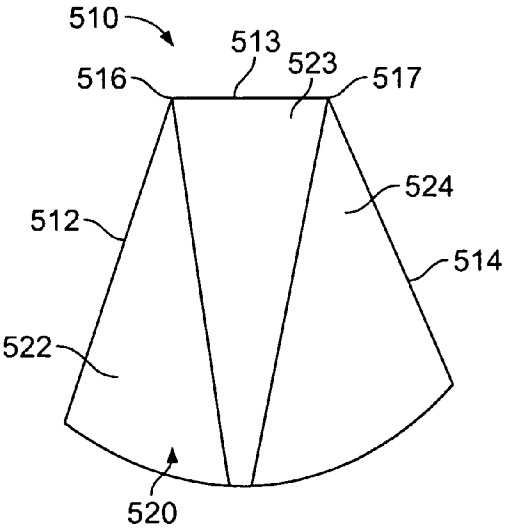

FIG. 37

ADJUSTABLE SHELF SYSTEM

[0001] This application claims the benefit of U.S. Provisional Application No. 60/692,216, filed Jun. 20, 2005, which is hereby incorporated by reference in its entirety.

FIELD OF THE INVENTION

[0002] The field of the invention relates to adjustable product displays, and particularly to product displays adaptable to fit in a given floor space.

BACKGROUND

[0003] Shelves are used in many applications. In various cases, it is desirable to place a shelf, or a shelf system, against a wall or in a comer. Shelf systems have been developed to fit in many types of spaces. In some systems, such as that disclosed in U.S. Pat. No. 1,455,569 to Caminoni, hinges have been used with a shelf system to facilitate the collapsing and expansion of a shelf system. The system of Caminoni is only expandable to a fixed width and is not adjustable to fit within a variety of spaces.

[0004] Retail shops such as delicatessens, bakeries and grocery stores generally have shelf systems for showing their wares to the public. Such cases are generally rectangular, and two adjoining cases might be set up in an angular fashion with respect to each other, rather than in a parallel side-to-side relationship. When two cases are arranged in an angular arrangement, a wedge-shaped floor space is formed between them. This wedge-shaped floor space is typically utilized to provide a display for other goods.

[0005] For example, where two refrigerated cases are arranged to provide a wedge-shaped space, a non-refrigerated wedge-shaped display can be erected between them. Such wedge-shaped displays have been used for years in delicatessen stores. However, each store and each location for these wedge-shaped displays is different. For example, the angular orientation of the adjacent refrigerated cases, and thus the angle formed by the wedge-shaped space between the adjacent refrigerated cases, can vary. The refrigerated cases are typically set up before the deli wedge displays without regard to the size or uniformity of the wedge-shaped area in between the cases. Thus, installers of the wedge-shaped displays must custom fit each display to fit in the particular floor space formed by the two cases. Previously known wedge-shaped shelf systems consisted of a flat pack of loose panels which were cut to fit a given wedge-shaped space in the store. This resulted in time consuming labor for the installer, who may be the store proprietor, and also produced waste material.

[0006] There are also instances where two walls, or other structures meet at obtuse angles, or define open corners. In such situations, it is often difficult to provide shelf systems that will flushly fit against the walls to maximize storage or display space.

[0007] What is needed, therefore, is a display cabinet which can be easily installed to fit into various non-uniform or irregularly-shaped spaces, such as wedge-shaped spaces, without cutting any of the pieces, and in which little or no waste material is generated during the installation. It would be desirable to have a custom shelf system that is adjustable to fit available space constraints and mount flushly against available backing surfaces, such as a wall or walls.

SUMMARY OF THE INVENTION

[0008] An adjustable shelf system is provided which can be readily sized to fit a non-uniform or irregularly-shaped space. The shelf system can be sized without cutting any portion of the case, so little or no waste material is generated.

[0009] One aspect of the invention thus provides an adjustable shelf system comprising a right and a left vertical side member and at least one horizontal shelf disposed there between. The right and left vertical side members each have a top and bottom side, which are substantially parallel to the floor on which the display stand sits. The right and left vertical side members each have a front side and a rear side which are oriented substantially perpendicular to the floor and are flexibly connected along the rear sides, so that the first and second vertical side members can move relative to each other in a plane which is substantially parallel to the floor. The at least one horizontal shelf comprises at least a left shelf portion connected to the inside of the left vertical side member, and a right shelf portion connected to the inside of the right vertical side member, which right and left shelf portions are substantially the same size and are adapted to slide across or inside one another when the display stand is adjusted to fit a given floor space. At least one supporting member is disposed underneath and in supportive relation to the horizontal shelf.

[0010] A further aspect of the invention provides a method of erecting an adjustable shelf system, comprising the steps of providing an irregularly-shaped floor space, constructing an adjustable shelf system comprising right and a left vertical side members, at least a left and right shelf portions which are substantially the same size, and at least one support member, and adjusting the shelf system to fit substantially into the irregularly-shaped floor space. The shelf system is constructed by hingedly connecting the right and a left vertical side members along the rear sides, so that the first and second vertical side members can move relative to each other in a plane which is substantially parallel to the floor. The left shelf portion is connected to the inside of the left vertical side member, and the right shelf portion is connected to the inside of the right vertical side member, so that the shelf portions slide across one another when the left and right vertical side member are moved relative to each other. The left and right shelf portions together form a horizontal shelf. The shelf system is then adjusted to fit substantially within the irregularly-shaped floor space by moving the left and right vertical side members and placing the shelf system within the floor space. The at least one supporting member is placed underneath and in supportive relation to the horizontal shelf.

[0011] Another aspect of the invention provides a method of displaying goods by erecting an adjustable display stand in irregularly-shaped floor space according to the invention, and placing goods in the display stand.

[0012] A still further aspect of invention provides a kit for erecting an adjustable shelf system, comprising prefabricated right and a left vertical side members, at least left and right prefabricated shelf portions which are substantially the same size, at least one prefabricated support member, and optionally instructions for erecting the shelf system and adjusting the shelf system to fit substantially into an irregularly-shaped floor space.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] **FIG. 1** is a perspective view of a shelf system according to an embodiment of the present invention.

[0014] **FIG. 2** is a perspective view of the shelf system of **FIG. 1** in an open position.

[0015] **FIG. 3** is a perspective view of an alternative embodiment of a shelf system according to the present invention.

[0016] **FIG. 4** is a perspective view of a hinge according to an embodiment of the present invention.

[0017] **FIG. 5** is an exploded cross-sectional view of the hinge of **FIG. 4**, in combination with side panels of a shelf system according to an embodiment of the present invention.

[0018] **FIG. 6** is a cross-sectional view of a hinge, in combination with a side panel of a shelf system according to an alternative embodiment of the present invention.

[0019] **FIG. 7** is a top plan view of a hinge assembly according to an alternative embodiment of the present invention.

[0020] **FIG. 8** is a top plan view of a hinge assembly according to an alternative embodiment of the present invention.

[0021] **FIG. 9** is a perspective view of a shelf according to an embodiment of the present invention.

[0022] **FIG. 10** is a front elevational view of the shelf of **FIG. 9**.

[0023] **FIG. 11** is a side elevational view of the shelf of **FIG. 9**.

[0024] **FIG. 12** is a top plan view of the shelf of **FIG. 9**.

[0025] **FIG. 13** is a perspective view of a shelf according to an embodiment of the present invention.

[0026] **FIG. 14** is a front elevational view of the shelf of **FIG. 13**

[0027] **FIG. 15** is a side elevational view of the shelf of **FIG. 13**.

[0028] **FIG. 16** is a top plan view of the shelf of **FIG. 13**.

[0029] **FIG. 17** is a perspective view of a brace according to an embodiment of the present invention.

[0030] **FIG. 18** is a close up view of a portion of the brace shown in **FIG. 17**.

[0031] **FIG. 19** is a perspective view of a base panel according to an embodiment of the present invention.

[0032] **FIG. 20** is a side elevational view of the panel of **FIG. 19**.

[0033] **FIG. 21** is a front elevational view of the panel of **FIG. 19**.

[0034] **FIG. 22** is a top plan view of the panel of **FIG. 19**.

[0035] **FIG. 23** is a top plan view of a second base panel according to an embodiment of the present invention.

[0036] **FIG. 24** is a top plan view of a shelf system according to an embodiment of the present invention.

[0037] **FIG. 25** is a perspective view of the shelf system of **FIG. 24**.

[0038] **FIG. 26** is a front elevational view of the shelf system of **FIG. 24**.

[0039] **FIG. 27** is a cross-sectional view of the shelf system of **FIG. 26** taken along the line **27-27**.

[0040] **FIG. 28** is a side elevational view of the shelf system of **FIG. 24**.

[0041] **FIG. 29** is a further side elevational view of the shelf system of **FIG. 24**.

[0042] **FIG. 30** is a cross-sectional view of the shelf system of **FIG. 27** taken along the line **30-30**.

[0043] **FIG. 31** is a perspective view of a shelf system according to an embodiment of the present invention, shown in an open position.

[0044] **FIG. 32** is a perspective view of the shelf system of **FIG. 31**, shown in a closed position.

[0045] **FIG. 33** is a perspective view of a shelf system according to an alternative embodiment of the present invention.

[0046] **FIG. 34** is a perspective view of the shelf system of **FIG. 33**, shown in an open position.

[0047] **FIG. 35** is an exploded view of the shelf system of **FIG. 33**.

[0048] **FIG. 36** is a top plan view of an alternative embodiment of a shelf system, shown in a closed position.

[0049] **FIG. 37** is a top plan view of the shelf system of **FIG. 36**, shown in an open position.

DETAILED DESCRIPTION OF THE DRAWINGS AND PREFERRED EMBODIMENTS

[0050] In the drawings, where like reference numerals indicate like elements throughout, there is shown an embodiment of a shelf system **10** for use in commercial, industrial or residential applications. The shelf system **10** is angularly expandable such that it may be disposed flush against walls or other objects having corners of various angles. As will be described in more detail below the shelf system **10** can be expanded from a closed position to an open position.

[0051] Referring generally to **FIGS. 1-5** and **8-31**, one embodiment of the shelf system **10** is constructed of right and left side members **12**, **14** joined by a hinge **16**. At least one, and preferably more than one, shelf **20** extends between the side members. Each shelf comprises a right and left shelf member **22**, **24**. The shelf system **10** may also include a brace **26** for the shelf and a front base panel **28**, adapted to span between the side members **12**, **14**. Like the shelf **20**, the base panel **28** comprises right and left base members **32**, **34**.

[0052] Right and left side members **12**, **14** each have a front portion **12***a*, **14***a* and a rear portion **12***b*, **14***b*. The rear portions **12***b*, **14***b* of the side members are preferably connected to each other in a hinged connection to facilitate the movement of the front portions **12***a*, **14***a* closer to and away from each other through rotation about the hinge **16**. The side members **12**, **14** are preferably adapted to rest on the floor or some other supporting surface. Alternatively, there

may be supports such as legs, casters or any other fixture suitable to facilitate contact of the shelf system with the supporting surface (not shown) disposed on the side members **12**, **14**. The right and left side members **12**, **14** are generally mirror images of each other and have bottom portions **12***c*, **14***c* adapted to engage or rest on the supporting surface and top portions **12***d*, **14***d* that define the top of the shelf system. While the figures show shelf systems **10** that have side members **12**, **14** which are generally solid panels, the side members **12**, **14** can have various constructions without departing from the scope of the present invention. By way of example, the side members **12**, **14** may have apertures **15** extending through the panels, be constructed of a lattice structure or simply be frames with support members located proximate to the hinge **16**, supporting surface and shelf **20**. Further, side members **12**, **14** having a variety of profiles may be used instead of the one shown in **FIGS. 1-3**, which has a generally tapered upper portion. The side members **12**, **14** may be constructed using various materials such as steel, aluminum or other metals, wood, plastic or any other material or combination of materials that is suitable for the construction of a generally rigid load bearing member.

[**0053**] The hinge **16** is attached to the rear portions of each side member. The hinge may be connected along the entire length of each rear portion, or at various points. As illustrated in **FIGS. 4 and 5**, in one embodiment, the hinge **16** may be made up of right and left T-portions **36**, **46** joined by a flexible center member **30**. Each T-shaped portion **36**, **46** contains a backing member **38**, **48** and an engagement extension **40**, **50** extending generally perpendicularly from a respective backing member **38**, **48**. When the backing members **38**, **48** are arranged in a co-planar fashion with the center member **30** disposed therebetween, it is preferable that the engagement extensions **40**, **50** are generally parallel to each other. A hinge axis extends through the center member, generally perpendicular to the supporting surface. During operation, the side members rotate about the hinge axis. The engagement extensions **40**, **50** preferably have a series of barbs **42**, **52** or other protrusions extending therefrom to facilitate engagement with the side members **12**, **14**.

[**0054**] Hinge slots **44**, **54** extend inwardly through the rear portions **12***b*, **14***b* of the side members **12**, **14**. It is preferable that the hinge slots **44**, **54** are generally parallel to the outer surfaces of the side members **12**, **14**. The hinge slots **44**, **54** are sized to frictionally accommodate the engagement extension **40**, **50** therein such that the barbs **42**, **52** resist the removal of the extensions **40**, **50** from the slots **44**, **54** once they are inserted.

[**0055**] An alternative embodiment of a hinge **116** is shown in **FIG. 6**. The hinge **116** is adapted to fit into a side panel **114** having a rear portion **114***b* with a generally S-shaped cross sectional profile. The hinge **116** has a generally flexible center portion **130** disposed between two lateral stepped members **132**, **134**. Preferably, portions of the stepped members **132**, **134** closer to the central member **130** have a narrow profile and outer step portions **136**, **138** have a thick profile when compared to the central member **130**. The rear portion **114***b* includes a C-shaped shaped hinge cavity **118**, sized to substantially encircle the outer step portions **138** for operational engagement therewith. A second side panel (not shown) is preferably a mirror image of the side panel **114** and adapted to engage the outer step portion **136**. Preferably, the hinge provides for rotation of the side panels about an axis disposed proximate the central member **130**.

[**0056**] A further alternative embodiment of a hinge assembly **216** is shown in **FIG. 7**. The hinge assembly **216** is constructed by joining rear portions **212***b*, **214***b* of side members **212** and **214**. Each of the rear portions **212***b*, **214***b* comprises a C-shaped hinge member **220**, **222**. The member **220** is mounted in line with the rear portion **212***b*, to provide for a smooth transition between the two. This engagement gives the general profile of a fish hook, with an elongated shaft and a curved bottom portion. The member **222** is mounted perpendicularly to the rear portion **214***b*, such that the member **222** faces in a generally opposite direction to the member **220**. The C-shaped members **220**, **222** engage each other in a locking relationship that permits a range of angular movement of the side members **212**, **214**.

[**0057**] **FIG. 8** shows another alternative embodiment of a hinge **316**. The hinge assembly **316** is similar to the hinge **116** shown in **FIG. 6**. The hinge **316** is adapted to fit into a side panel **314** having a rear panel **314***b* that is generally flat and an S-shaped retaining member **318** fixedly attached thereto. The hinge **316** has a generally flexible center portion **330** disposed between two lateral stepped members **332**, **334**. Preferably, portions of the stepped members **332**, **334** closer to the central member **330** have a narrow profile and outer step portions **336**, **338** have a thick profile when compared to the central member **330**. The rear panel and the retaining member **318** preferably form a cavity **320** sized and adapted to retain the outer step portion **338** therein. Also like the hinge **116**, the hinge **316** is adapted to be fit into another side member (not shown) which is a mirror image of the side member **314**. The retaining member **318** may be attached to the rear panel **314***b* by welding, a threaded connection such as a bolt, rivets or any other suitable means.

[**0058**] Although the above hinge embodiments **16**, **116**, **216**, **316** have been discussed, those skilled in the art will recognize that many various hinge embodiments may be used without departing from the scope of the invention. By way of example, a series of hinges having loops extending from each side member **12**, **14** and joined by a pin. There may be a series of these hinges disposed along the height of the side members **12**, **14** or, there may be a continuous series of alternating loops. Alternatively, in the case where the side members **12**, **14** are constructed using a flexible material, the hinge may simply be a weakened portion that extends perpendicular to the supporting surface. These and other hinge embodiments may be used within the scope of the present invention.

[**0059**] The shelf **20** is preferably adapted to expand in a fan-like manner with the movement of the side members **112**, **114** such that the shelf **20** spans the space between the side members **112**, **114** regardless of their positioning. In such an arrangement, the right shelf member **24** overlaps the left shelf member **22**.

[**0060**] The right shelf member **24**, shown in detail in **FIGS. 8-11**, has a generally wedge shaped top surface, with a pointed rear portion **24***b* and a generally arcuate front portion **24***a*. A mounting flange **66** extends downwardly from the right side **24***c* of the right shelf member **24**. The mounting flange **66** is adapted to be mounted on the right side member **14** through the use of screws, bolts, clips or other known fasteners.

[0061] The left shelf member **22** is generally a mirror image of the right shelf member **24**, and together they form the shelf **20**. In use, the right shelf member **24** slides over the left shelf member **22** during expansion and contraction of the shelf system **10**. The left shelf member **22**, shown in detail in **FIGS. 12-15**, has a generally wedge shaped top surface, with a pointed rear portion **22***b* and a generally arcuate front portion **22***a*. A mounting flange extends **64** downwardly from the left side **22***c* of the left shelf **22**. The mounting flange **64** is adapted to be mounted on the left side member **12** through the use of screws, bolts, clips or other known fasteners.

[0062] The shelf **20** is preferably sized to fill the depth of the shelf system **10**, which is generally the distance between the front sections **12***a*, **14***a* of the side members **12**, **14** to the rear sections **12***b*, **14***b*. There may be shelves **20** of varying depths within one shelf system **10**, such as those shown in **FIGS. 1-3**. Regardless of the depth of each shelf **20**, it is preferable that the arcuate right and left front portions **22***a*, **24***a* of each shelf **20** share a common radius to present a homogenous front edge **20***a* of the shelf **20**.

[0063] Although two overlapping shelf portions **22**, **24** are disclosed here, the shelf system may have many various shelf configurations without departing from the scope of the present invention. By way of example, the shelf system may have telescoping shelf portions that fit inside each other when the shelf system is in a closed position and are in an expanded state when the shelf system is in an open position.

[0064] Additional support for the shelf **20** is preferably provided by the brace **26**. The brace **26** is preferably expandable to span between the right side member **14** and the left side member **12** below the shelf **20**. The shelf **20** then rests on the brace **26**, and may be fixedly attached to the brace **26**. In the embodiment shown in **FIGS. 16 and 17**, the brace **26** is constructed using metal strips **70**, **72** bent along its longitudinal axis at a 90° angle. At least one of the strips **70**, **72** has an adjustment slot **76** extending longitudinally along a portion of its length. If both strips do not have an adjustment slot **76**, then one may have a bolt hole, tab or like mechanism to facilitate adjustably locking the brace strips **70**, **72** together at a desired length. The strips are retained together using a bolt **74**. Although a bolt is shown here, those skilled in the art will recognize that any number of retaining devices may be used without departing from the scope of the present invention.

[0065] Alternatively, there may be support members (not shown) extending from the hinge or other portions of the side panels **12**, **14** at various angles to support the shelf **20**. A first end of these support members preferably engages one of the side members **12**, **14** or hinge **16** below the shelf and extends upwardly and towards the front of the shelf system **10**. A second end of the support member engages the bottom side of the shelf **20**, thereby providing support to the shelf **20**. In addition, while expandable support members are described, support members that are cut to length on site may also be used with the shelf system **10**.

[0066] Below the bottom-most shelf **20**, the base panel **28** covers the space between the side members **12**, **14** and the shelf **20** and the supporting surface. Like the shelf **20**, the base panel **28** is made up of right and left member panels **80**, **82** that overlap to form a substantially continuous front surface. Preferably, mounting tabs **84**, **86** extend from each of the member panels **80**, **82** on the side of the panels that engages the side members **12**, **14**. The mounting tabs **84**, **86** preferably contain holes, tabs or other mechanisms to facilitate their mounting to the side panels **12**, **14**. It is also preferable that the base panels have arched tabs **85** at their top and bottom edges. In use, the tabs **85** of one panel fit inside of the tabs of the other to secure the first panel **80** substantially flush to the second panel **82**. The base panel **28** may also provide support to the shelf **20** that it is disposed immediately below, in a manner similar to the way the brace **26** functions.

[0067] **FIGS. 30 and 31** show the shelf system **10** in an assembled state. **FIG. 30** shows an exemplary width of the shelf system in an "open" position, marked on the supporting surface by the arrows O. **FIG. 31** shows the shelf system **10** in a "closed" position, wherein the space occupied by the shelf system is smaller than that of the open position. The arrows C on the supporting surface indicate the width of the shelf system **10**, relative to the width of the shelf system **10** in the open position. While the angle between the side members **12**, **14** is less than 180° in **FIG. 30** and less than 90° in **FIG. 31**, its is contemplated that the shelf system is expandable to angles of 180° between the side members **12**, **14**, such that the shelf system could be mounted substantially flushly against a wall. Further, the shelf system may expand to have 270° between the side members **12**, **14** so that the shelf system may be disposed about an outside comer, such as to be disposed about a portion of a square pillar. These and other angles of the shelf system are contemplated without departing from the scope of the present invention. Some preferable acute angles for the shelf system **10** to operate within may range from 30° to 55°, for example 45°.

[0068] FIGS. **33** to **35** show a shelf system **410** having six shelves **420** and a top cover portion **450**. The shelves **420** are similar in their construction to the shelves **20** and have right and left shelf members **422**, **424**. The shelves **420** also attach to right and left side members **412**, **414** and are supported by a support brace **426** in a similar fashion as the shelves **20**. The shelf system **410** has top and bottom face panels **440**, **428** which function similar to base panel **28** described above. The side panels **412**, **414** are joined together, and rotatable about a hinge **416**, which is similar to the hinge **16**.

[0069] An alternative embodiment of a shelf system **510** is shown in **FIGS. 36 and 37**. The shelf system **510** has side members **512**, **514**, a rear panel **513** and hinges **516**, **517** joining the side members **512**, **514** to the rear panel **513**. Shelf members **522**, **524** function with a central shelf portion **523** to form a shelf **520**. The shelf system **510** is collapsible, about the central shelf portion **523**. In a collapsed state, the shelf system **510** may have a generally rectangular footprint, as opposed to the generally triangular or fan shaped footprint of the shelf system **20**. In an open state, the shelf system **510** had a generally fan shaped footprint, with the exception of a flattened rear portion defined by the rear panel **513**. The shelf **520**, and hinges **516**, **517** function in a similar manner to the shelf **20** and hinges **16**, **116**, **216** and **316** described above. The shelf system may also have front base panels, top panels and support member (not shown).

[0070] There may also be ornamental displays used in connection with the shelf system **10**. Such displays may include signage, advertising and other indicia. There may

also be a front cover disposed about the open end of the shelf system **10**. Such a cover may be beneficial in instances where the shelf system is used to display baked goods or other food products contained in open containers.

[**0071**] The adjustable display stand of the invention comprises various pieces which can be provided already assembled, or as some or all of the component parts which are assembled by the user. If the adjustable display stand is provided as some or all of the component parts, these parts are preferably provided in the form of a kit which optionally contains instructions for assembly and use of the stand.

[**0072**] For example, the side panels can be prefabricated, including the predrilled holes and the hinge slots. The plastic T-hinge can be further connected at the point of origin. Similarly, the top and bottom shelves and base panel can be prefabricated, including predrilled screw holes. The expandable support member can also be prefabricated.

[**0073**] The prefabricated unit can be shipped to a retail outlet or point of use. To erect the display stand, the installer opens the side panels already connected by one or more hinges (or installs the hinge(s) to the side panels). The side panels are opened flat on a work surface. The installer installs the left and right top and bottom shelves using fasteners and the predrilled holes. Similarly, the left and right toe panels are connected using the predrilled holes and fasteners. Thereafter, the unit is raised and oriented in an upright and opened configuration. The side panels are moved towards one another while aligning the toe panels and shelves. The display unit is adjusted for the desired angular orientation of the side panels and the telescopic bracket is secured to the corresponding length.

[**0074**] A variety of modifications to the embodiments described will be apparent to those skilled in the art from the disclosure provided herein. Thus, the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and, accordingly, reference should be made to the appended claims, rather than to the foregoing specification, as indicating the scope of the invention.

What is claimed:

1. A shelf system comprising:

first and second side members having a front and rear portions, the rear portions hingedly connected to each other by a hinge having a hinge axis;

at least one expandable shelf extending between the first and second side members and adapted to laterally expand when the first side member is rotated about the hinge axis away from the second side member.

2. The shelf system according to claim 1, the shelf comprising first and second shelf members;

wherein the first shelf member is adapted to substantially overlap the second shelf member when the shelf system is in a closed position.

3. The shelf system according to claim 1, further comprising a support member extending between the first and second side members and adapted to support the shelf;

wherein the support member is longitudinally expandable and contractible, such that the support member is fixedly attached to the first and second side members below the shelf, with the shelf at least partially resting on the support member.

4. The shelf system according to claim 1, further comprising an expandable front panel extending between the first and second side members perpendicular to the shelf.

5. The shelf system according to claim 1, wherein the hinge axis is generally perpendicular to a surface that supports the shelf system.

6. The shelf system according to claim 1, wherein the first and second side members move in a plane that is generally parallel to a surface that supports the shelf system.

7. A method of erecting a shelf system comprising the steps of:

providing an irregularly-shaped floor space;

constructing an adjustable shelf system comprising right and a left side members connected by a hinge, at least right and left shelf portions which are substantially the same size, and at least one support member; and

adjusting the display stand to fit substantially into the irregularly-shaped floor space by rotating the left and right side members relative to each other about the hinge.

8. The method according to claim 7, wherein the shelf system is constructed by hingedly connecting the right and a left side members along rear portions thereof, such that the right and left side members can move relative to each other in a plane which is substantially parallel to the floor.

9. The method according to claim 7, wherein the left shelf portion is connected to the inside of the left side member, and the right shelf portion is connected to the inside of the right member, so that the shelf portions slide across each other when the left and right side members are moved relative to each other.

10. A kit for erecting an adjustable shelf system, comprising:

first and second prefabricated side members having a front and rear portions, the rear portions capable of being hingedly connected to each other by a hinge having a hinge axis;

at least one prefabricated expandable shelf extending between the first and second prefabricated side members and adapted to laterally expand when the first side member is rotated about the hinge axis away from the second side member; and

optionally instructions for erecting the adjustable shelf system.

11. A shelf system comprising:

first and second side members having a front and rear portions, the rear portions of the first and second side members attached to first and second hinges respectively;

at least one panel spanning between the first and second hinges; and

at least one expandable shelf extending between the first and second side members and adapted to laterally expand when the first and second side members is rotated about the first and second hinges away from each other.

12. The shelf system according to claim 11, the shelf comprising first and second shelf members;

wherein the first shelf member is adapted to substantially overlap the second shelf member when the shelf system is in a closed position.

13. The shelf system according to claim 12, further comprising third shelf member disposed between the first and second shelf members.

14. The shelf system according to claim 13, wherein the third shelf member is attached to the at least one panel that spans between the first and second hinges.

15. The shelf system according to claim 11, wherein each of the first and second hinges have a hinge axis that is generally perpendicular to a surface that supports the shelf system and the first and second side members rotate about the first and second hinge axes respectively.

16. The shelf system according to claim 11, wherein the first and second side members move in a plane that is generally parallel to a surface that supports the shelf system.

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