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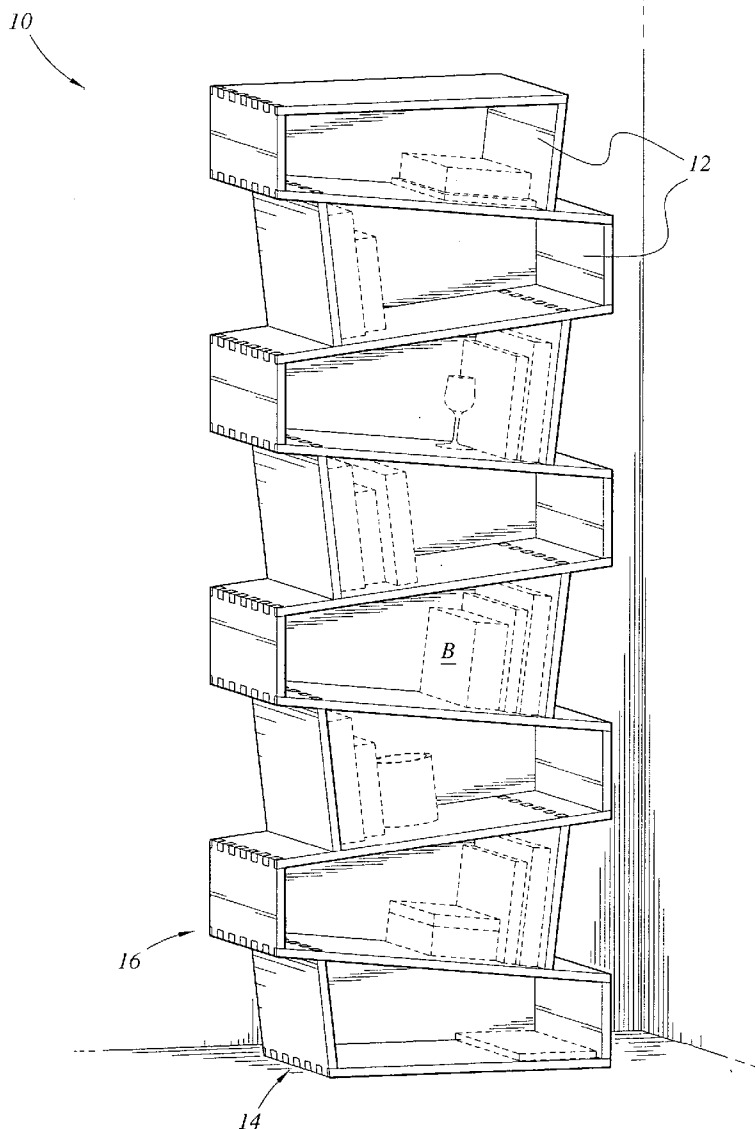
(19) **United States**(12) **Patent Application Publication****Jones**(10) **Pub. No.: US 2006/0243177 A1**(43) **Pub. Date: Nov. 2, 2006**(54) **BOOKCASE WITH SLOPING SHELVES**(52) **U.S. Cl. 108/180**(76) **Inventor: Peter J. Jones, Denver, CO (US)**(57) **ABSTRACT**

Correspondence Address:
LITMAN LAW OFFICES, LTD
PO BOX 15035
CRYSTAL CITY STATION
ARLINGTON, VA 22215 (US)

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The bookcase with sloping shelves has multiple shelf compartments that slope in opposite directions. The compartments include a base section and at least one upper section connected to the base section. The base section includes a bottom wall, a top wall and opposing sidewalls attached to the bottom and top walls, one of the sidewalls being of greater height than the other. The upper section includes a shelf panel and opposing sidewalls depending from the shelf panel. The sidewalls, one being of greater height than the other, are attached to the top wall of the base section. Compartments are therefore formed that slope in opposite directions from one another because of the sidewalls of varying height.



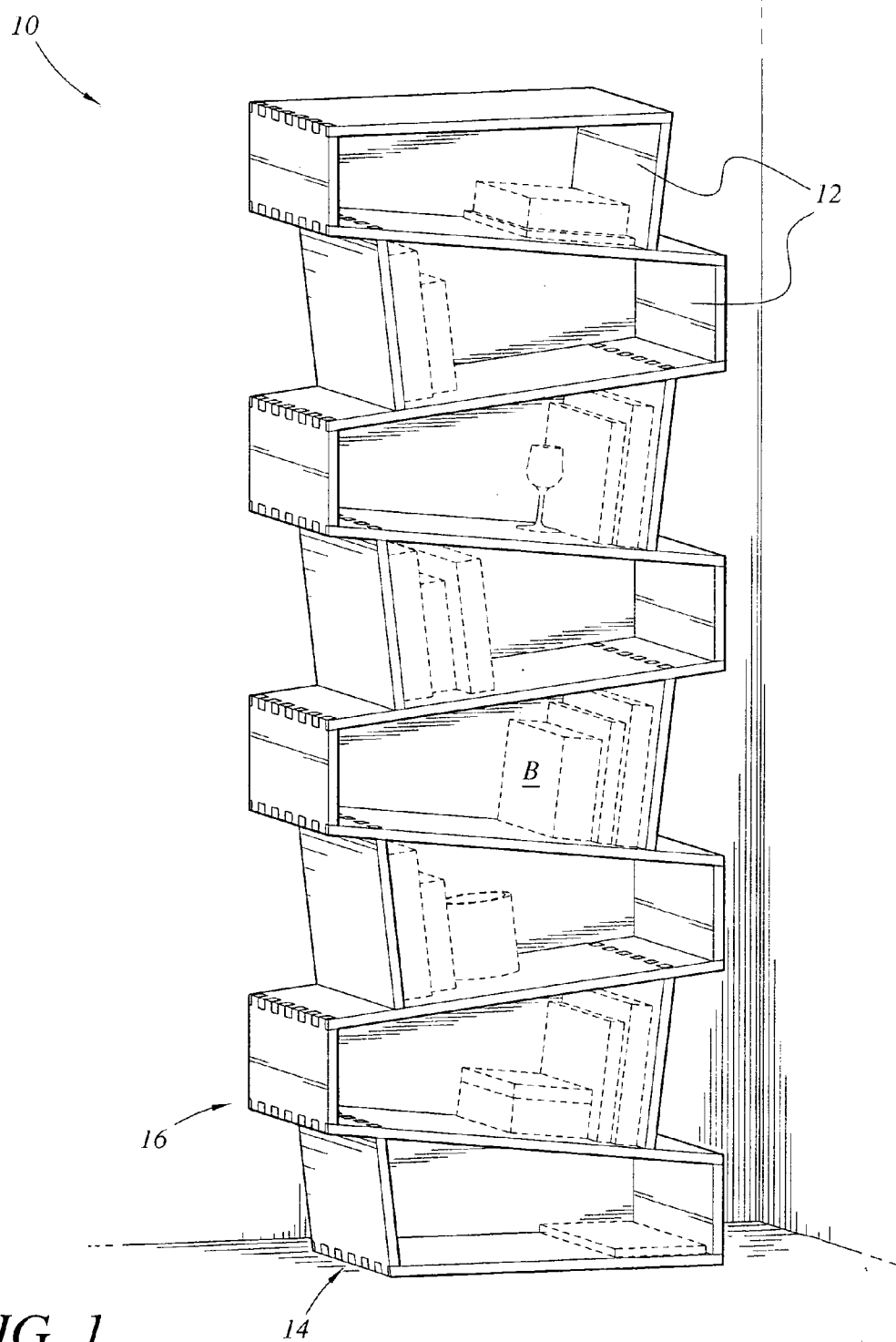


FIG. 1

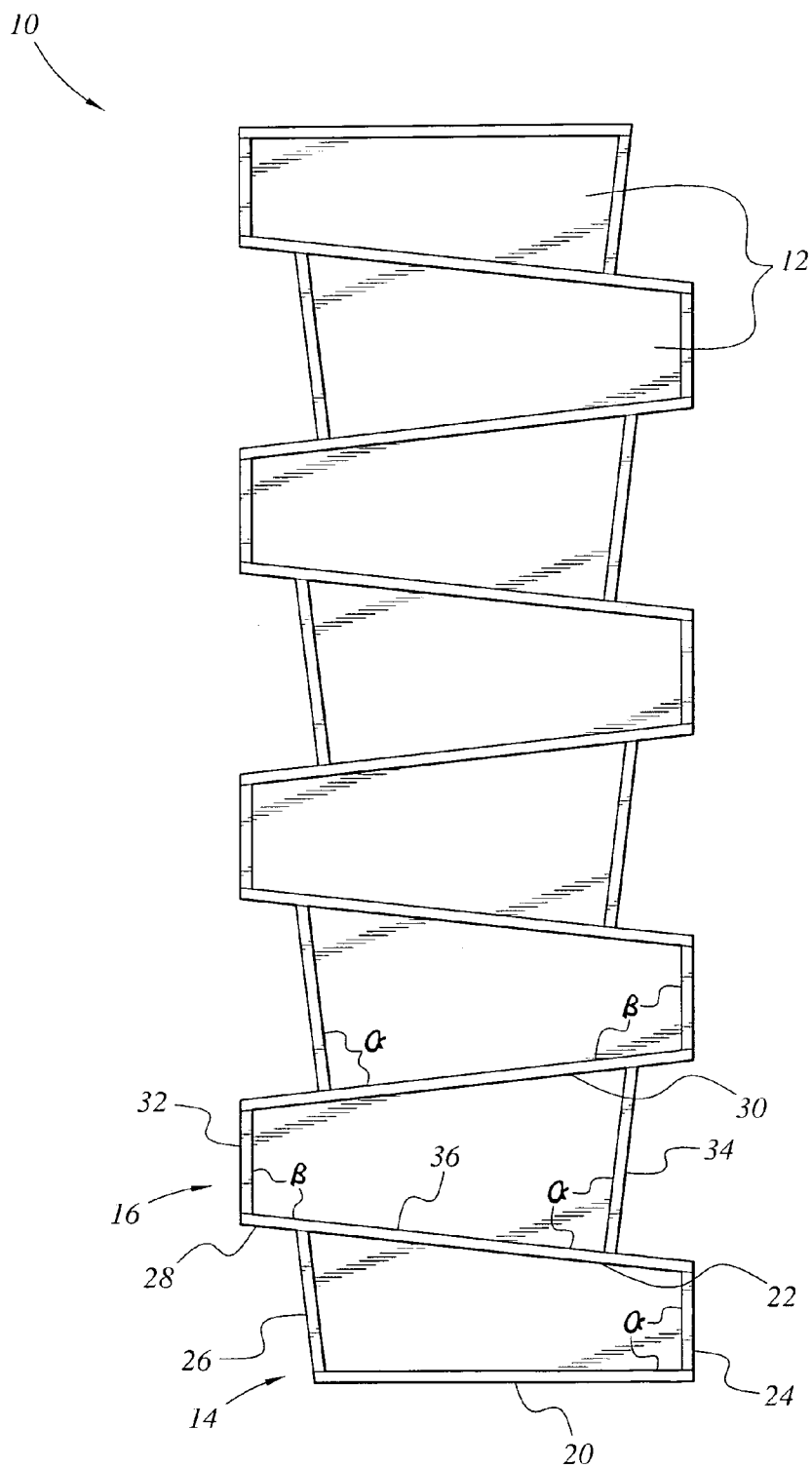


FIG. 2

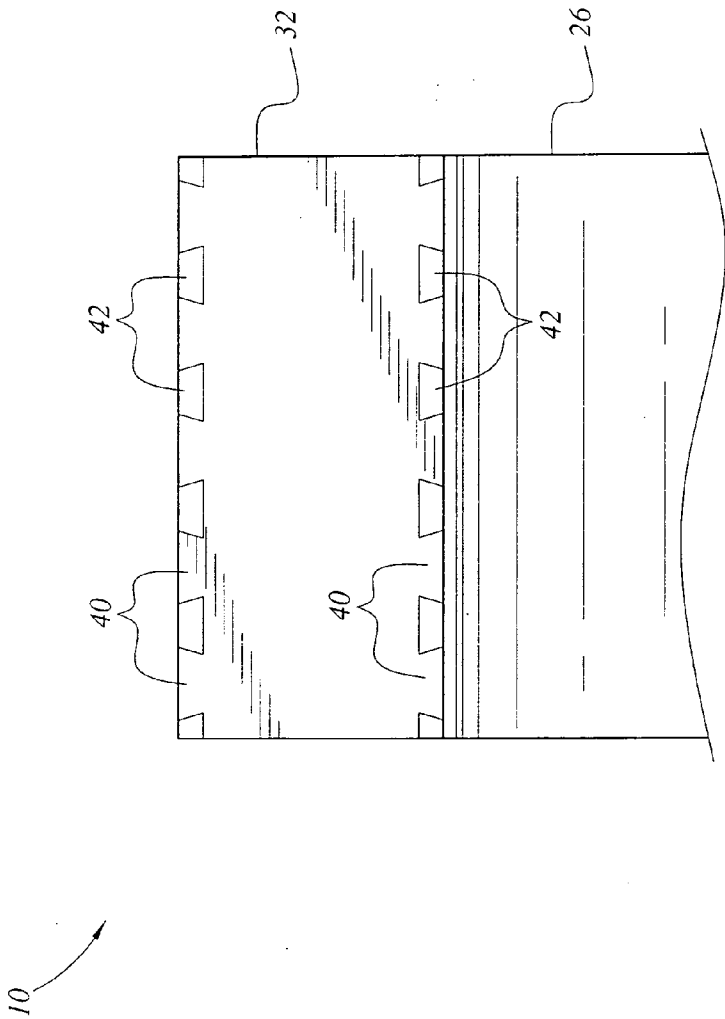


FIG. 3

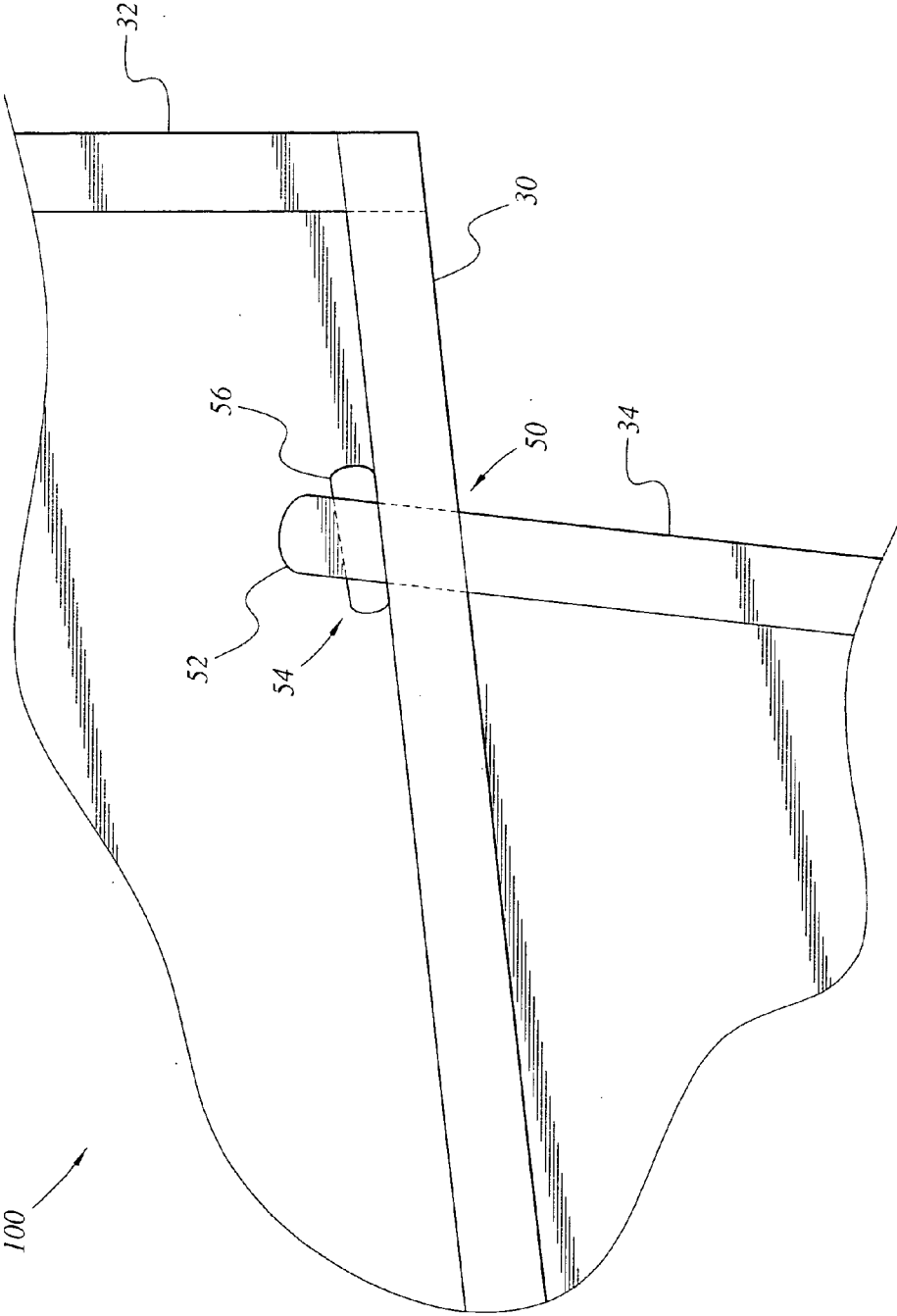


FIG. 4

BOOKCASE WITH SLOPING SHELVES

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates generally to bookcases, and particularly to a bookcase with shelves sloping in opposite directions.

[0003] 2. Description of the Related Art

[0004] Bookcases typically have a frame and multiple shelves within the frame that are generally horizontally disposed and parallel to each other. The flat base allows for books to be placed within the bookcase, abutting one another for easy access. However, books vary in height and width, resulting in wasted space when multiple books are placed in the bookcases. Some bookcases are provided with adjustable shelving in order to use shelf space more efficiently. However, many people find adjustable shelving aesthetically displeasing.

[0005] In order to maintain stability, books are sometimes placed within the bookcases by height, with different shelves dedicated to books of the same height. Often the bigger, more cumbersome books are set on the lower shelves and the smaller, less cumbersome books are placed higher so the bookcase is steadier. Shorter users therefore may have problems accessing the books on higher shelves, while users with knee problems have may difficulty reaching larger books that are placed on the lower shelves.

[0006] Bookcases also tend to be quite static in their aesthetic appeal. Very few variations are made from bookcase to bookcase. Further, bookcases do not often vary in the type of joinery used to keep the shelving together. Bookcases are often manufactured using mass production techniques from laminated particle board joined by hardware, so that the bookcases have a plain, rather mundane appearance. More ornate, elaborate joinery, such as dovetail joinery, is not generally utilized with modern bookcases.

[0007] Accordingly, there is a need for a bookcase that allows books of varying height to be placed within the shelves, and which also provides a unique aesthetic look to the piece. Thus, a bookcase with sloping shelves solving the aforementioned problems is desired.

SUMMARY OF THE INVENTION

[0008] The bookcase with sloping shelves is a bookcase having multiple sloped shelf compartments to accommodate books of various heights. The shelf compartments include a base section and at least one upper section connected to the base section that slope in opposite directions.

[0009] The base section includes a bottom wall, a top wall and opposing sidewalls attached to the bottom and top walls. One sidewall is greater in height than the other, so that the top wall is slanted at an angle relative to the bottom wall. The top wall extends beyond one of the sidewalls in cantilever fashion.

[0010] The upper section includes a shelf panel and opposing sidewalls depending from the shelf panel. The sidewalls are attached to the top wall of the base section. One sidewall is of greater height than the other sidewall, and the shelf panel is therefore slanted at an angle relative to the top wall of the base section.

[0011] The sidewalls may be attached to the bottom and top walls and the shelf panels using dovetail joinery, finger joinery, or any other type of joinery able to attach the sidewalls. In another embodiment, the longer sidewalls may be attached by inserting the sidewall ends into apertures in the top and bottom walls and the shelf panels and securing the sidewalls to the top and bottom walls and shelf panels by inserting pegs within apertures in the sidewall ends. The pegs keep the sidewalls affixed to the top and bottom walls and shelf panels and allow the bookcase to be constructed without the need for an adhesive.

[0012] These and other features of the present invention will become readily apparent upon further review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] **FIG. 1** is a perspective view of a bookcase with sloping shelves according to a first embodiment of the present invention.

[0014] **FIG. 2** is an elevational front view of the bookcase with sloping shelves according to a first embodiment of the present invention.

[0015] **FIG. 3** is a fragmented elevational side view showing a portion of the bookcase with sloping shelves according to a first embodiment of the present invention.

[0016] **FIG. 4** is a fragmented front view of the bookcase with sloping shelves showing an alternate method of joining adjacent shelf compartments according to a second embodiment of the present invention.

[0017] Similar reference characters denote corresponding features consistently throughout the attached drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0018] The present invention is a bookcase with sloping shelves that allows for books of differing heights to be placed within each of the shelf compartments. The bookcase with sloping shelves, designated generally as **10** in the drawings, includes a plurality of shelf sections integrally connected to one another.

[0019] Turning first to **FIG. 1**, a perspective view of the bookcase with sloping shelves **10** is shown. The bookcase **10** has a plurality of shelf compartments **12** including a base section **14** and at least one upper section **16** integrally attached to the base section **14**. The base section **14** and the upper section **16** define shelf compartments **12** that slope in opposite directions. Books **B** and other articles of varying height may then be situated within each shelf compartment **12**. Each shelf compartment **12** has a back wall so that books do not slide through the compartment **12**.

[0020] The bookcase **10** may be made from wood, including cherry, maple, walnut or any other type of wood, or may be made from any structural material able to support numerous articles within the shelf compartments **12**.

[0021] **FIG. 2** shows an elevational front view of the bookcase with sloping shelves **10**. The base section **14** and the upper section **16** are integrated together. The base section **14** includes a bottom wall **20**, a top wall **22** and opposing first **24** and second **26** sidewalls. The sidewalls **24** and **26** are

attached to the bottom wall 20 and to the top wall 22. The sidewalls 24 and 26 may be attached to the bottom 20 and top 22 walls using dovetail joinery, finger joinery or any other type of joinery that would allow for attachment between the sidewalls 24 and 26 and the top 20 and bottom 22 walls.

[0022] The second sidewall 26 is greater in height from the bottom wall 20 to the top wall 22 than the first sidewall 24. The difference in height from the bottom wall 20 to the top wall 22 between the two sidewalls 24 and 26 slopes the top wall 22 at an angle relative to the bottom wall 20. The top wall 22 has an end section 28 that extends beyond the second sidewall 26 in cantilever fashion.

[0023] The upper section 16 includes a shelf panel 30 and two opposing sidewalls 32 and 34 depending from the shelf panel 30. The sidewalls 32 and 34 are each attached to the top surface 36 of the top wall 22 of the base section 14. The second upper section sidewall 34 is greater in height from the top wall 22 of the base section 14 to the shelf panel 30 than the first upper section sidewall 32. Angle α , defined between sidewall 24 and bottom wall 20, is substantially a 90-degree angle. Angle β , defined between sidewall 32 and top wall 22, is about a 97-degree angle. Further upper section shelves are sloped at the same angles as upper section 16, but are flipped 180° so that the shelves slope in the opposite direction.

[0024] It will be noted that a portion of shelf panel 30 extends beyond the sidewall 34 of greater height in cantilever fashion for a distance about equal to the cantilever end section 28 of the bottom shelf section 14, and this pattern is repeated in succeeding upper sections 16 (except for the top upper section) so that the center of gravity of the bookcase 10 is located in a longitudinal plane bisecting the width of the bookcase 10.

[0025] Turning now to FIG. 3, a fragmented side view of the bookcase with sloping shelves 10 is shown. The sidewalls 24, 26, 32 and 34 may be attached to the bottom wall 20, top wall 22 and shelf panels 30 using dovetail joinery. Dovetail projections 40 are cut into the ends of the sidewalls 24, 26, 32 and 34 and define sockets between the projections 40. The bottom wall 20, top wall 22 and shelf panels 30 each have dovetail projections 42 cut out from the ends of the walls 20 or 22 or shelf panels 30. The sockets defined between the dovetail projections 40 of the sidewalls 24, 26, 32 and 34 are adapted to receive the wall and panel dovetail projections 42 when the sidewalls 24, 26, 32, and 34 engage the respective walls 20 or 22 or panels 30.

[0026] While dovetail joinery is shown, any other type of joinery, including finger joinery, may be used to attach the sidewalls 24, 26, 32, and 34 to the bottom wall 20, top wall 22 or panels 30.

[0027] FIG. 4 shows a detailed elevational front view of a second embodiment of the bookcase with sloping shelves 100. Apertures 50 are defined within the shelf panels 30 and the top wall 22 (not shown in FIG. 4). The sidewalls 26 and 34 of greater height are adapted to engage the apertures 50 defined within the top wall 22 and panels 30, respectively. End portions 52 of the sidewalls 26 and 34 are inserted through the apertures 50. The end portions 52 have peg-engaging apertures 54 defined therein into which a peg 56 is inserted. The peg-engaging apertures 54 decrease in diam-

eter from one end to the other end of the aperture 54. The pegs 56 taper in diameter from one end to the other end of the peg 56 so that when the pegs 56 are inserted within the peg-engaging apertures 54, the pegs 56 are tightly held within the peg-engaging apertures 54. Thus, the sidewall 34 or 26 is secured against the panel 30 or bottom or top walls 20 and 22 without the need for an adhesive.

[0028] It is to be understood that the present invention is not limited to the embodiments described above, but encompasses any and all embodiments within the scope of the following claims.

I claim:

1. A bookcase with sloping shelves, comprising:

a base section having a bottom wall, a top wall, and opposing sidewalls, the opposing sidewalls being unequal in height so that the top wall slopes at an angle relative to the bottom wall, the top wall having an end extending beyond the sidewall of greater height in cantilever fashion; and

at least one upper section having a shelf panel and opposing sidewalls depending from the shelf panel, the upper section sidewalls being unequal in height and attached to a top surface of the top wall of the base section;

whereby the base section and the at least one upper section define shelf compartments sloping in opposite directions.

2. The bookcase with sloping shelves according to claim 1, further comprising means for attaching the base section sidewalls to the top and bottom walls.

3. The bookcase with sloping shelves according to claim 2, wherein the means for attaching the base section sidewalls to the top and bottom walls comprises dovetail joints.

4. The bookcase with sloping shelves according to claim 2, wherein the means for attaching the base section sidewalls to the top and bottom walls comprises finger joints.

5. The bookcase with sloping shelves according to claim 2, wherein the means for attaching at least one of the sidewalls to the top wall comprises a peg and an aperture defined within the sidewall, the peg releasably engaging the aperture.

6. The bookcase with sloping shelves according to claim 1, further comprising means for attaching the upper section sidewalls to the shelf panel and the top wall of the base section.

7. The bookcase with sloping shelves according to claim 6, wherein the means for attaching the upper section sidewalls to the shelf panel and the top wall comprises dovetail joints.

8. The bookcase with sloping shelves according to claim 6, wherein the means for attaching the upper section sidewalls to the shelf panel and the top wall comprises finger joints.

9. The bookcase with sloping shelves according to claim 6, wherein the means for attaching at least one of the upper section sidewalls to the shelf panel comprises a peg and an aperture defined within the sidewall, the peg releasably engaging the aperture.

10. The bookcase with sloping shelves according to claim 1, wherein said base section and said at least one upper section each further comprise a back wall closing a rear portion of the sections.