

[54] FIBER BOARD TABLE

[75] Inventor: Michael F. Notko, Riverside, Ill.
[73] Assignee: Druth Packaging Corp., Chicago, Ill.
[22] Filed: April 19, 1971
[21] Appl. No.: 135,014

[52] U.S. Cl.108/157, 108/153, 248/188.7
[51] Int. Cl.A47b 3/06
[58] Field of Search.....108/115, 153, 157, 159;
248/188.7

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Primary Examiner—James C. Mitchell
Attorney—Dawson, Tilton, Fallon & Lungmus

[57] ABSTRACT

A fiber board table includes a generally horizontal top and an elongated generally vertically extending base for supporting the top. The base is formed from a single sheet of fiber board which is provided with spaced-apart fold lines to permit the base to be folded to provide a plurality of legs which extend radially outwardly from the central axial portion of the base. The sheet includes tab means adjacent the lower end thereof for interconnecting the spaced-apart walls of each leg, and the top includes downwardly extending tab means for connecting the top to the base and for reinforcing the upper end of the legs.

6 Claims, 12 Drawing Figures

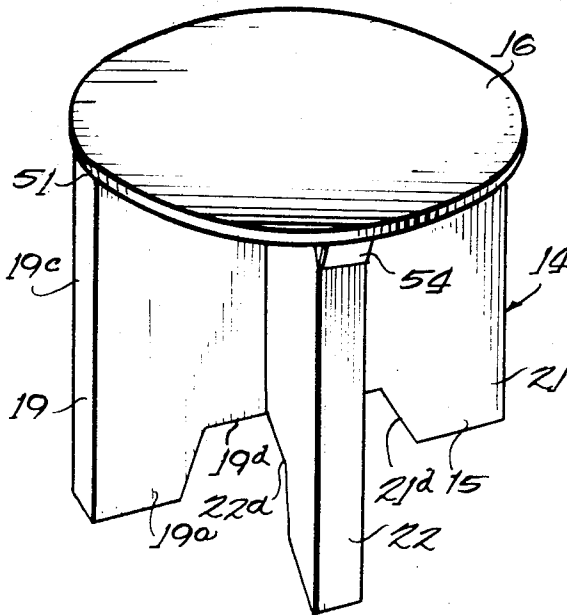


Fig. 1.

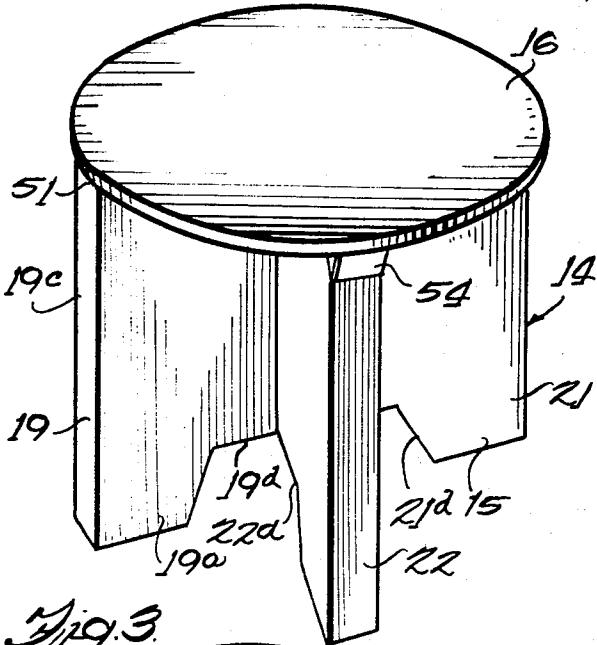


Fig. 2.

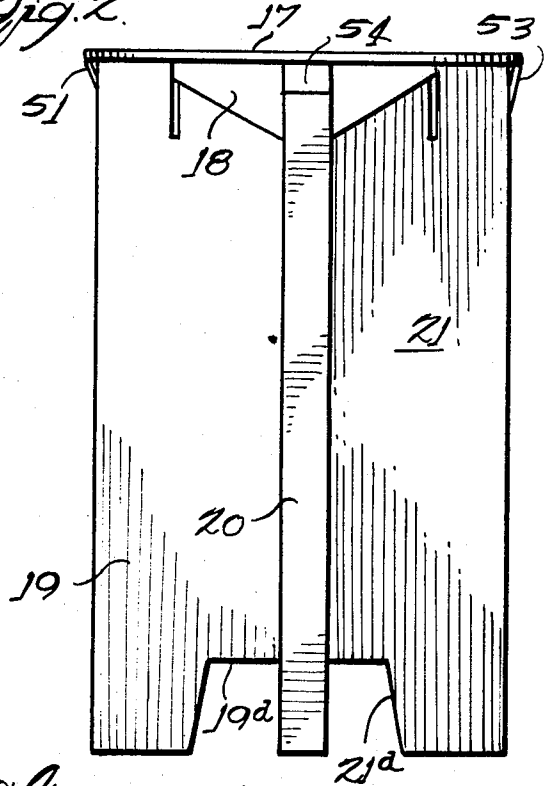


Fig. 3.

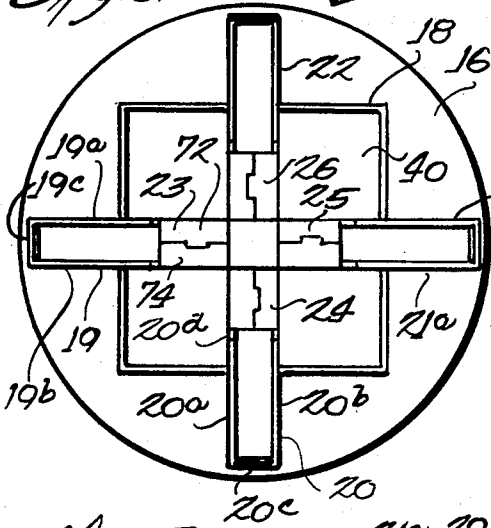


Fig. 4.

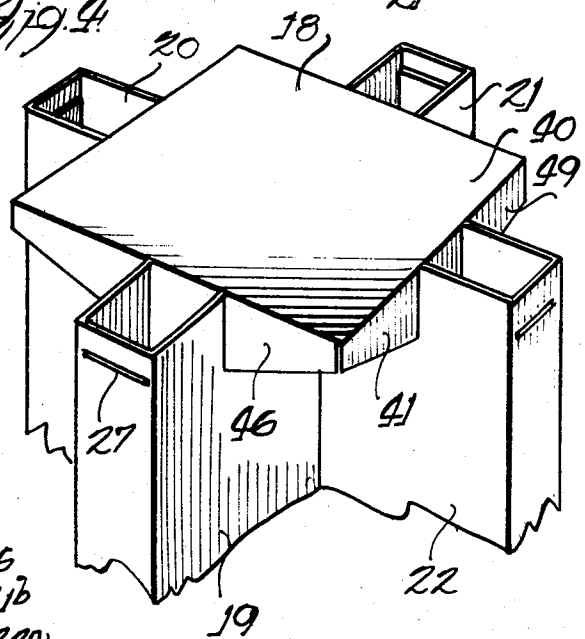
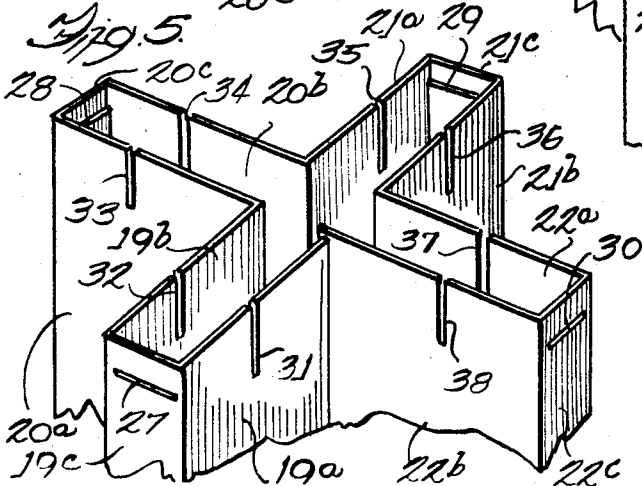
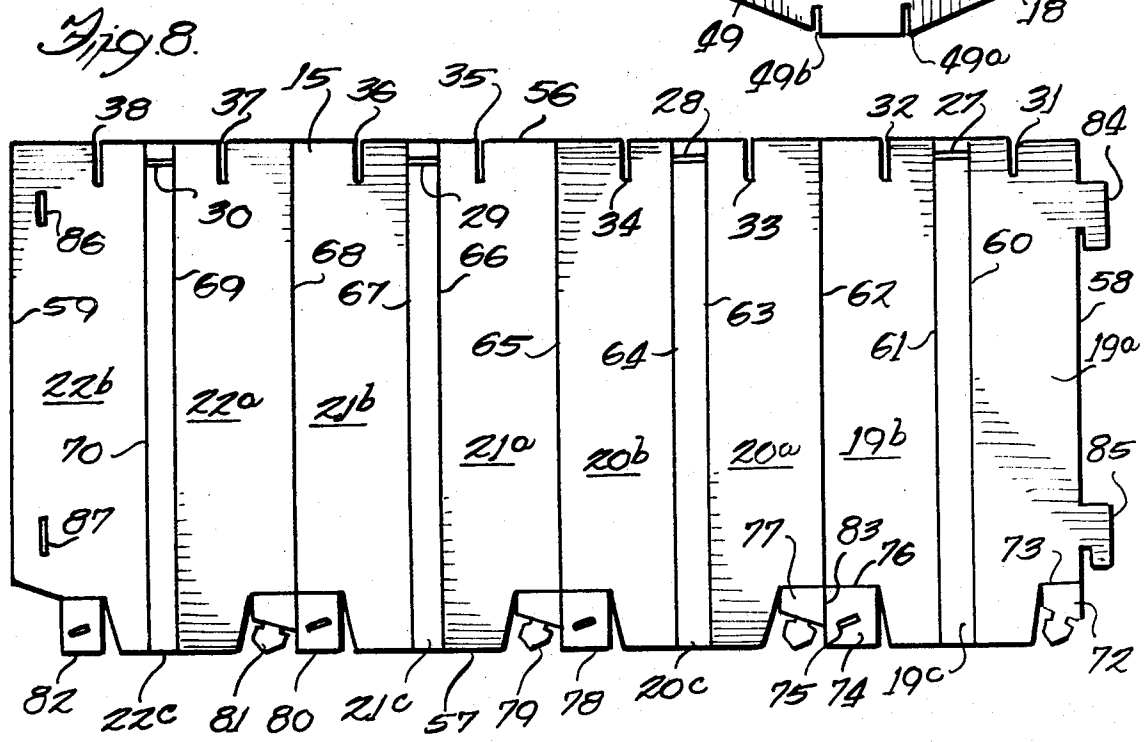
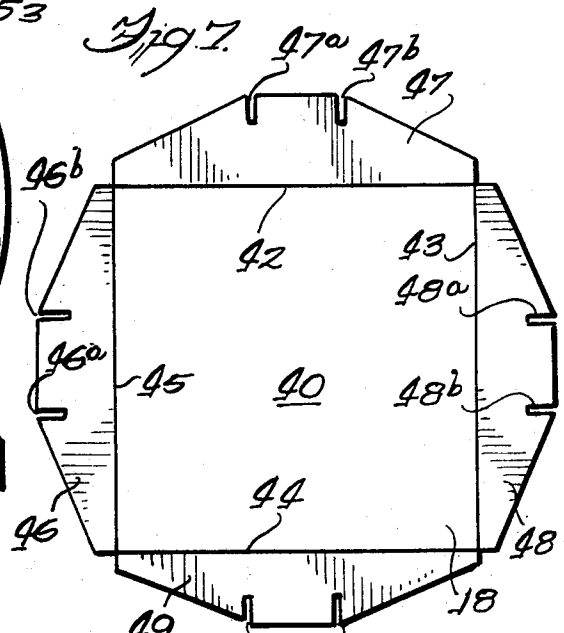
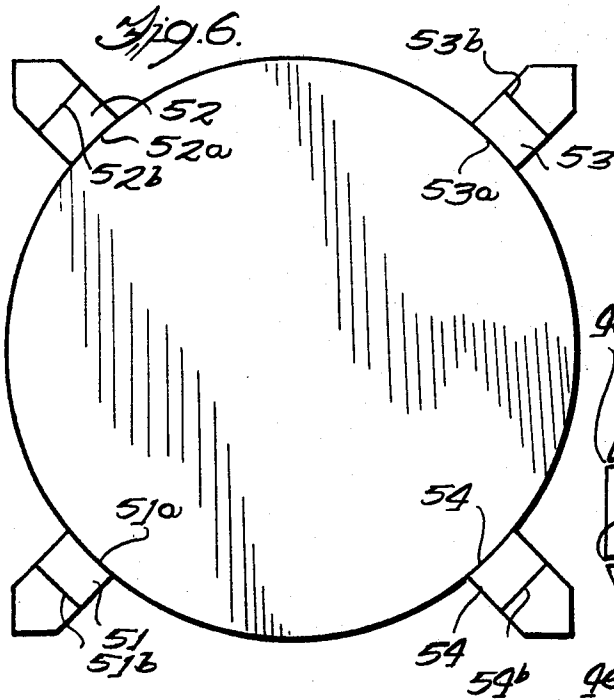


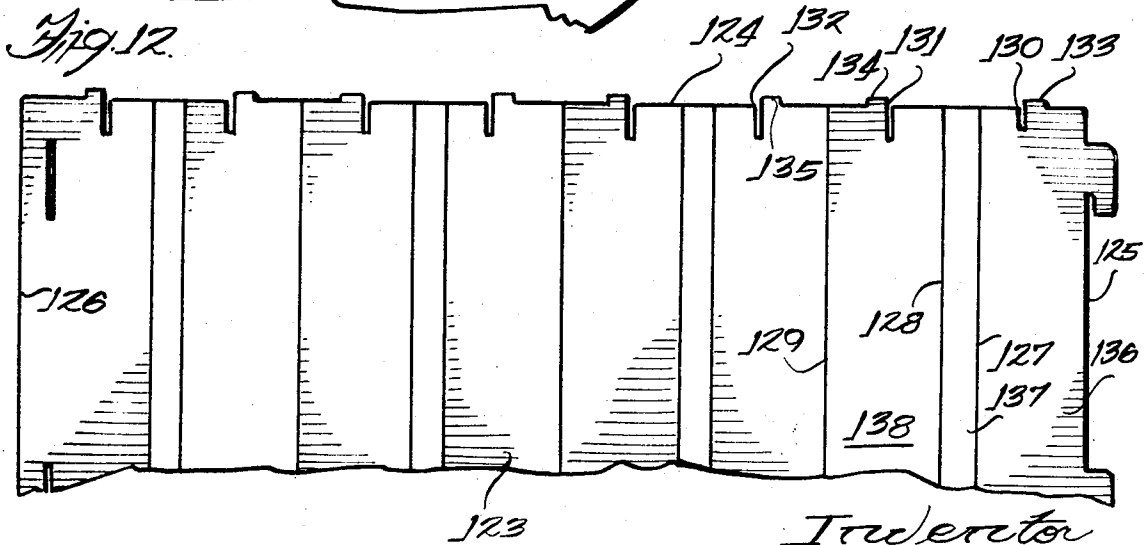
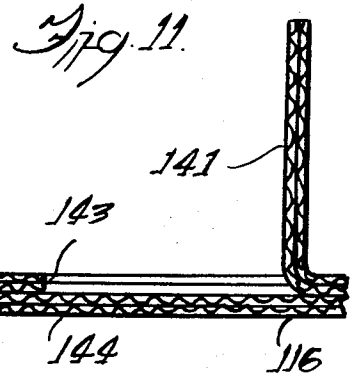
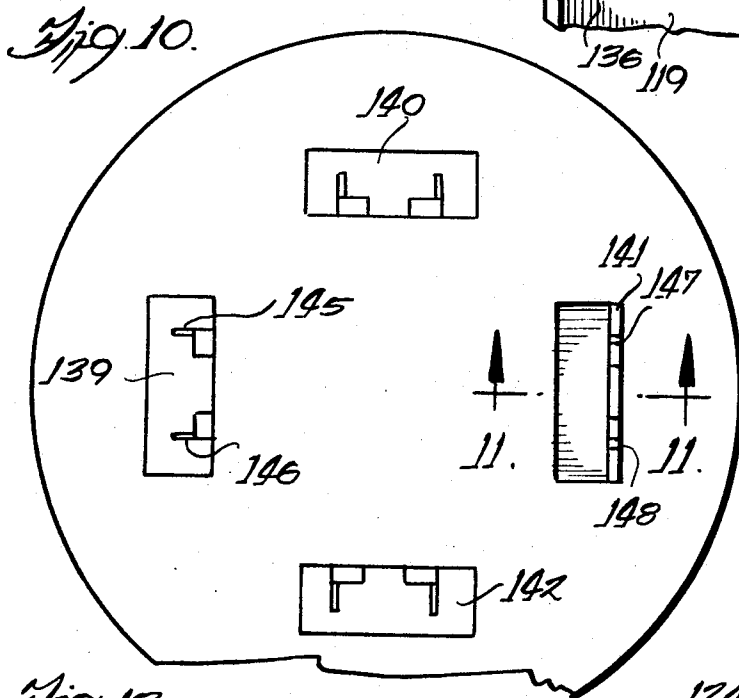
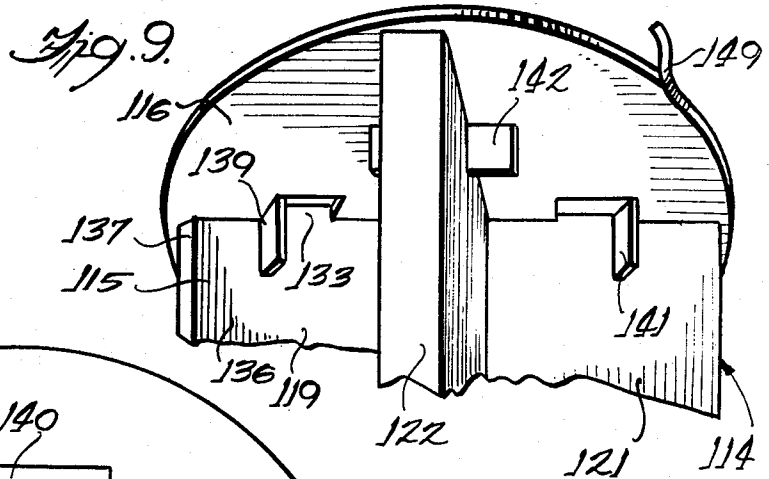
Fig. 5.



Inventor
 Michael F. Rotko
 Dawson, Ilton, Fallon
 by: + Lemmus
 Attys



Inventor
 Michael F. Notko
 Dawson, Dillon, Fallon
 by: & Lungmus Atty's



Inventor
Michael F. Tottle
Dawson, Titon, Fallon
By: & Lungmuir
Attys

FIBER BOARD TABLE

BACKGROUND AND SUMMARY

This invention relates to tables, and more particularly, to the table form of corrugated fiber board, solid fiber board, or the like.

Articles made of fiber board or the like are usually relatively inexpensive and also extremely light weight. However, such material is generally not suitable for making articles which require strength and durability such as tables or similar articles of furniture.

A table formed in accordance with this invention possesses the desirable features of other articles made of fiber board, for example, economy and lightness, while at the same time providing a very sturdy and durable construction. The table includes a supporting base which is formed from a single blank sheet of material which is folded to provide a plurality of spaced-apart vertically extending supporting legs. Each leg includes a pair of spaced-apart walls, and the lower ends of the walls are reinforced by tab means which interconnect the walls. The upper ends of the walls of the legs are reinforced by the top which is releasably connected to the base. The spaced-apart walls of the legs provide a stable base which safeguards against inadvertent tipping of the table, and the interconnection between the walls of the legs and the interconnection between the top and the legs provides a sturdy, durable construction. If it is desired to disassemble the table for storage, shipping, or the like, the top can be readily disconnected from the base, and the base can be folded back to its original flat condition.

DESCRIPTION OF THE DRAWING

The invention will be explained in conjunction with illustrative embodiments shown in the accompanying drawing, in which;

FIG. 1 is a perspective view of a table formed in accordance with the invention;

FIG. 2 is a side elevational view of the table of FIG. 1;

FIG. 3 is a bottom plan view of the table of FIG. 1;

FIG. 4 is a fragmentary perspective view similar to FIG. 1 with the top removed;

FIG. 5 is a view similar to FIG. 4 with the top-reinforcing brace removed;

FIG. 6 is a plan view of the top blank in a lay-flat condition;

FIG. 7 is a plan view of the top-reinforcing brace in a lay-flat condition;

FIG. 8 is a plan view of the base of the table in a lay-flat condition;

FIG. 9 is a fragmentary perspective view of another embodiment of the invention;

FIG. 10 is a bottom plan view of the top for the table illustrated in FIG. 9;

FIG. 11 is an enlarged fragmentary sectional view taken along the lines 11-11 of FIG. 10; and

FIG. 12 is a fragmentary plan view of the base of the table of FIG. 9 in a lay-flat condition.

DESCRIPTION OF SPECIFIC EMBODIMENTS

Referring to FIGS. 1-3, the numeral 14 designates generally a table which is formed of solid fiber board, corrugated fiber board, or like material. The table in-

cludes an elongated, generally vertically extending base 15 and a top 16 supported by the base. The top includes a generally planar horizontally extending top panel 17 and a top-reinforcing brace 18, and the particular top panel illustrated has a circular periphery.

The base includes four elongated vertically extending legs 19, 20, 21 and 22 which extend radially outwardly from adjacent the central longitudinal axis of the base. Each of the legs is generally box-like in transverse cross section and includes a pair of spaced-apart parallel walls which are joined by an outer wall. For example, leg 19 includes spaced-apart walls 19a and 19b and an outer wall 19c, and leg 20 includes spaced-apart walls 20a and 20b and an outer connecting wall 20c. The legs 21 and 22 are similarly formed. Each outer spaced-apart wall of each leg is connected to a spaced-apart wall of an adjacent leg and extends generally at right angles thereto. For example, wall 19b is connected to wall 20a of leg 20, and wall 20b of leg 20 is connected to wall 21a of leg 21. Each of the legs 19-22 is provided with a notched or cut-away central portion 19d, 20d, 21d, and 22d, respectively, and the spaced-apart walls of each leg are connected at the notched portion by locking tab means indicated generally by the numerals 23, 24, 25, and 26 in FIG. 3.

Referring now to FIGS. 4 and 5, the upper ends of the outer walls for the legs 19-22 are provided with horizontal slots 27, 28, 29 and 30, respectively. Each of the spaced-apart walls on each leg is provided with a vertical slot which extends downwardly from the upper edge thereof, the walls 19a and 19b being provided with vertical slots 31 and 32, respectively, the walls 20a and 20b being provided with slots 33 and 34, respectively, the walls 21a and 21b being provided with slots 35 and 36, respectively, and the walls 22a and 22b being provided with slots 37 and 38.

The top-reinforcing brace 18 includes a generally rectangular flat central panel 40 and a generally downwardly extending side wall 41. Referring to FIG. 7, the top-reinforcing brace 18 is formed from a single sheet of fiber board and is provided with orthogonally related fold lines 42, 43, 44 and 45 which defines the central panel 40. The side wall 41 is provided by flaps 46, 47, 48, 49, which extend outwardly from the fold lines 42-45, respectively. Each of the flaps 46-49, is provided with a pair of slots which are spaced apart the same distance as the spaced-apart walls of the legs, flap 46 being provided with slots 46a and 46b, flap 47 being provided with slots 47a and 47b, flap 48 being provided with slots 48a and 48b, and flap 49 being provided with slots 49a and 49b.

The reinforcing brace is formed by folding the flaps 49-49 about their respective fold lines about 90°, and the slots in each of the flaps are interfitted with the slots in the walls of the legs. For example, slots 46a and 46b are interfitted with the slots 31 and 32 of the leg 19, slots 47a and 47b are interfitted with the slots 33 and 34 of the leg 20, etc. The interfitting of the slotted brace with the slotted legs reinforces the legs and provides a secure attachment of the base to the legs.

The top panel 17 is supported by the flat central portion 40 of the brace and includes four tabs 51, 52, 53 and 54 which are spaced apart about 90 degrees around the periphery of the circular top panel. The top panel is also formed of a blank of sheet material, and

each of the tabs 51-54 is defined by an arcuate fold line 51a, 52a, 53a, and 54a, respectively. The tabs are also provided with fold lines 51b, 52b, 53b, and 54b which are spaced outwardly of the arcuate fold lines, the spacing between each arcuate fold line and each associated outer fold line being approximately the same as the distance between the slots 27-30 in the outer walls of the legs plus the thickness of the reinforcing panel 40. The top is secured to the base by positioning the top panel above the brace 18, folding the tabs about the arcuate fold lines, and inserting the outer ends of the tabs into the slots in the walls of the legs. The outer end of tab 51 is received in the slot 27, the outer end of tab 52 is received in the slot 28, etc.

As shown in FIG. 8, the base 15 is also seen to be formed from an integral sheet of fiber board material. The sheet includes upper and lower parallel edges 56 and 57, respectively, and parallel sides or edges 58 and 59 which extend generally perpendicularly to the upper and lower edges. The sheet is provided with longitudinally spaced fold lines which extend parallel to the side edges and which define the walls of the legs. The wall 19a of the leg 19 is defined by the side edge 58 near the fold line 60, wall 19c of the leg 19 is defined by fold lines 60 and 61, and wall 19b of the leg 19 is defined by fold lines 61 and 62. Similarly, the walls 20a, 20c, and 20b of the leg 20 are defined by the fold lines 62, 63, 64, and 65; walls 21a, 21c, and 21b are defined by fold lines 65, 66, 67 and 68; and walls 22a, 22c, and 22b, are defined by fold lines 68, 69, 70 and side edge 69.

Each of the panels which will form the spaced-apart walls of the legs is provided with a slotted flap or tab adjacent the bottom thereof. For example, panel 19a includes a tab 72 which is defined by a fold line 73, and panel 19b is provided with a slotted flap 74 which includes a slot 75 sized to receive the end of the tab 72 and which is foldable about fold line 76. Similarly, panels 20a and 20b include a tab 77 and a slotted flap 78, respectively, panels 21a and 21b are provided with tab 79 and slotted flap 80, respectively, and panels 22a and 22b are provided with tab 81 and slotted flap 82. Each of the tabs and slotted flaps are foldable about generally horizontal fold lines similar to the fold lines 73 and 76, and each adjacent tab and flap is separated by a slit which is aligned with the fold line which separates the adjacent panel. For example, the flap 76 and the tab 77 are separated for independent movement about their associated fold lines by a slit 83 which extends downwardly from the fold line 76 in alignment with the fold line 62.

Means for connecting the panel 19a to panel 22b after the sheet 15 is folded are provided in the form of tabs 84 and 85 which extend outwardly from the side edge 58 and which are adapted to be received in the slots 86 and 87, respectively, in the panel 22b.

The base is formed by folding each of the panels along the fold lines 60-70 through an angle of about 90° relative to the adjacent panels, some of the panels being folded inwardly as viewed in FIG. 8 and some of the panels being folded outwardly to form the configuration shown in FIG. 5. The tabs 84 and 85 are then inserted into the slots 86 and 87, and the lower ends of the spaced-apart walls for each leg can be connected by folding the associated tabs and slotted flaps inwardly

and inserting the tabs into the flaps. Referring to FIG. 3, the connecting means 23 comprise the tab 72 which is inserted into the slotted flap 75.

From the foregoing it will be seen that each leg is provided with a relatively sturdy box-like configuration in which the spaced-apart walls are connected at their outer ends by the outer wall and are tied together adjacent the lower end of the base by the tabs and flaps and are tied together adjacent the upper end of the base by the top-reinforcing brace 18. The legs are therefore maintained in a substantially vertical position, and the table can support a substantial weight even though it is made of fiber board. The rectangular cross sectional shape of the legs also provides desired stability to the table.

Another embodiment of the invention is illustrated in FIGS. 9-11. The table 114 similarly includes a base 115 and a top 116. The base 115 is formed substantially identically to the base 15 and includes elongated vertically extending legs, three of which are shown in FIG. 9 and indicated as 119, 121, and 122.

Referring to FIG. 12, the blank 123 is substantially identical to the blank 15 and includes an upper edge 124 and parallel side edges 125 and 126. The lower portion of the blank 123 is broken away, but the lower portion thereof is identical to the lower portion of the blank 15 and includes the interlockable tabs and slotted flaps as shown in FIG. 8. Similarly, the blank 123 is provided with spaced-apart parallel fold lines 127, 128, 129, etc. for permitting the blank to be folded to form the generally box-like legs as herein described. The only difference between the blank 123 and the blank 15 lies in the upper portions thereof. The blank 123 includes the downward extending vertical slots 130, 131, 132, etc., which are identical to slots 31-38, but the upper edge 124 is provided with upwardly extending projections adjacent each of the vertical slots. For example, projection 133 extends adjacent the slot 130, projection 134 adjacent the slot 131, and projection 135 adjacent the slot 132. Each projection is positioned relative to the adjacent slot to be positioned inwardly of the slot when the blank is folded to form the legs. For example, comparing FIGS. 9 and 12, projections 133 and 134 will be positioned directly inwardly of the aligned slots 130 and 131.

The blank 123 also differs from the blank 115 in that no slots are provided in the relatively narrow panels which form the outer walls of the legs.

The top of table 115 differs from the top of table 15 in that the top 116 comprises a generally planar top panel and does not include a top-reinforcing brace. The top panel can conveniently be made of two layers of fiber board material which are laminated together, and the top panel is connected to the legs and reinforces the legs by downwardly extending tabs 139, 140, 141, and 142. Referring to FIG. 11, the panel 116 comprises a lower layer 143 which is adhesively united to an upper layer 144. Each of the layers 143 and 144 shown in FIG. 11 are double-walled corrugated fiber board having a pair of corrugated liners or cores separated by an inner liner and covered by a pair of outer liners. The tabs 139-142 can be provided by cutting through the lower layer 143 along three orthogonally related lines and folding the cut portion of the lower layer away from the upper layer to form a semi-rectangular tab. In

FIG. 10, tabs 139, 140, and 142 have been cut but have not been folded outwardly, while tab 141 has been folded into position for engagement with a leg at the base. Each of the tabs is also provided with a pair of slots which are spaced apart a distance corresponding to the spacing between the outer walls of the legs. For example, tab 139 includes slots 145 and 146, and tab 141 includes slots 147 and 148. The top of the table is connected to the base by interfitting the slot of the downwardly folded tabs with the slots in the spaced-apart walls of the legs as shown in FIG. 9.

The projections 133, 134, 135, etc. which are provided adjacent the slots in the legs have a length approximately the same as the vertical dimension of the tabs so that the vertical shoulder provided by the inner edge of the projection abuts the cut edge of the lower layer of the top which is exposed by the downwardly folded tab. The top is thereby secured against horizontal movement by the tabs and by the cooperation between the abutting shoulders of the projections and the lower layer 140.

If desired, the periphery of the top panel 116 can be covered with a tape 149 (FIG. 9) to cover the exposed flutes of the corrugated fiber board to render the top more resistant to water and to provide a more aesthetically pleasing appearance. Further, the fiber board sheets of both the tables 14 and 114 can be covered with plastic sheets of simulated wood grain design to enhance the appearance of the table.

Although the tables herein described are extremely sturdy and durable by virtue of the cooperation and interfitting of the top and the base and the connections between the walls of the legs at both the top and bottom thereof, the tables can be quickly disassembled for storage, shipping, and the like when desired. The table can be disassembled by following the reverse procedure that has been described for erecting the table.

While in the foregoing specification, detailed descriptions of specific embodiments of the invention were set for the purpose of illustration, it is to be understood that many of the details herein given may be varied considerably by those skilled in the art without departing in spirit and scope of the invention.

I claim:

1. A fiber board table comprising an elongated generally vertically extending base and a top supported by the base, the base including a plurality of generally vertically extending legs which are joined along the central axial portion of the base and extend generally radially outwardly therefrom, each of the legs including a pair of spaced-apart generally parallel vertically extending walls and a vertically extending outer wall extending generally perpendicularly between the spaced-

apart walls, the top including a generally horizontally extending generally planar top surface and tab means for connecting the top to the base.

2. The table of claim 1 in which the outer wall of each of the legs is provided with a generally horizontally extending slot adjacent the upper end thereof, the tab means of the top including four tabs, each tab being received in one of the slots in the outer walls.

3. The table of claim 1 including a top reinforcing brace having a generally horizontally extending top wall supporting the top and a generally vertically extending side wall extending between and being interconnected with the legs, the side wall of the brace having a plurality of slots extending upwardly from the lower edge thereof, each of the spaced-apart walls of each of the legs being provided with a vertically extending slot at the upper end thereof, each slot in the walls of the legs being interfitted with a slot in the lower edge of the side wall of the brace.

4. The table of claim 1 including a slotted flap extending from one of the spaced-apart walls of each leg toward the other spaced-apart wall of the leg adjacent the bottom thereof and a tab extending from said other spaced-apart wall toward the first spaced-apart wall, the tab being received by the slot of the flap.

5. The table of claim 1 in which the top is formed of upper and lower laminated layers of corrugated fiber board, portions of the lower layer being slit and folded downwardly to provide tabs for connecting the top to the base, each of the downwardly folded tabs providing an opening in the lower layer and an exposed edge portion in the lower layer, the upper edge of each of the spaced-apart walls of each leg including a generally vertically extending shoulder received by one of the openings in the lower layer and engaging an exposed edge portion of the lower layer, the radial length of each shoulder being substantially the same as the radial dimension of the associated opening between the downwardly extending tab and the edge portion of the lower layer exposed by the tab whereby the shoulder substantially secures the top against horizontal movement relative to the base.

6. The table of claim 1 in which the base is formed from an integral sheet of fiber board having generally parallel spaced-apart upper and lower edges and generally parallel spaced-apart side edges extending generally perpendicularly to the upper and lower edges, the sheet being provided with a plurality of spaced-apart generally parallel fold lines extending between the upper and lower edges thereof, the sheet being folded through an angle of about 90° along each of the fold lines to provide the spaced-apart walls and the outer wall for each leg, and means for connecting the folded sheet adjacent the side edges thereof.

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