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(54) Collapsible table

(57) A collapsible table (10) includes a table top (12), at least one shelf (14) and a plurality of folding legs (18-24). The legs are attached to the tabletop and are foldable between an extended and erected position and a folded and transport position. The one or more shelves (14,16) are slidably positioned on the legs and have a nested positions adjacent to the underside of the tabletop and a use positions. In the use positions the shelf or shelves lock the extended legs in place. A hinge or pivot point on the legs is positioned displaced down the legs from the lower surface of the table top a distance approximately the thickness of the shelf or shelves to define the nesting region for the shelves intermediate the folded legs and the underside of the table top. In preferred embodiments, the table top and shelves are blow-moulded or rotationally moulded of thermopolymers.

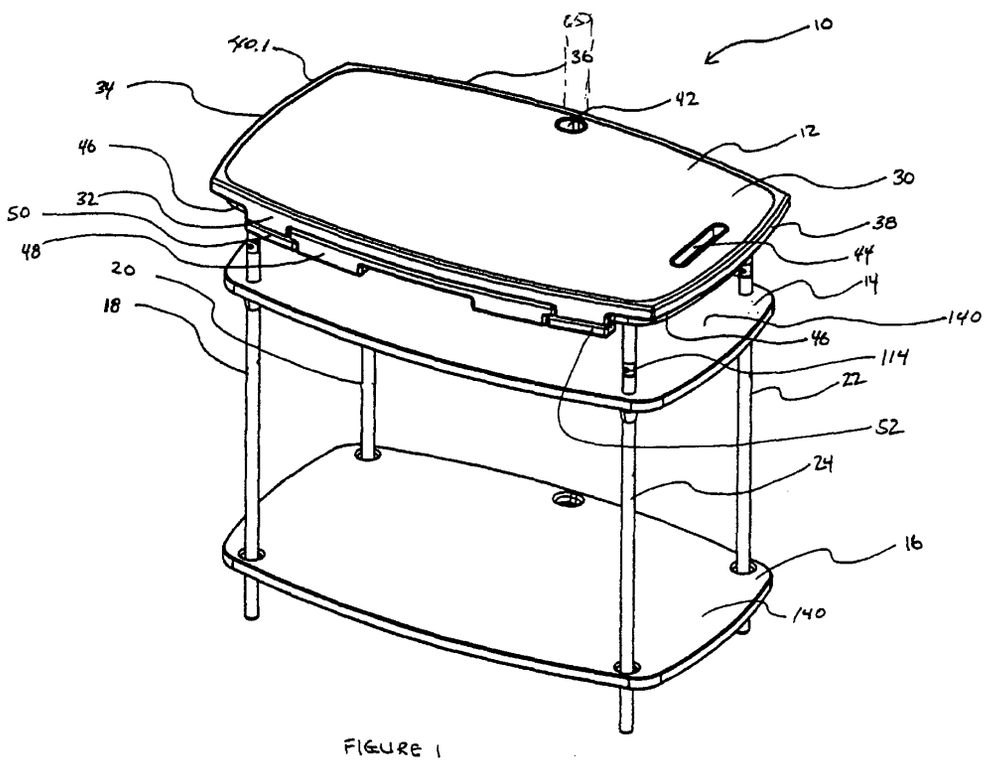

FIGURE 1

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Description

[0001] The present invention relates generally to collapsible items of furniture, for example collapsible tables. More particularly, the present invention relates to a collapsible table with shelves that is particularly suitable for use in trade shows or the like.

[0002] At tradeshows, vendors and salespersons often use collapsible tables to display their products and services. The vendors sometimes bring their own collapsible large banquet-style tables with them if they are travelling by ground and with a vehicle large enough to transport the tables. Alternatively, such tables are often available to vendors by renting them from the facility at which tradeshow is being held. However, the rental tables are usually expensive to rent. In addition to paying for the tables, the vendors are often also charged for the time and labour that it takes workers to set up and tear down the tables. When the rental tables are not banquet-type tables but rather complex tables requiring some level of assembly, the vendors are usually charged for the time and labour that it takes workers to assemble the tables. Moreover, the rental tables are usually very generic looking and provide no visual impact to tradeshow attendees.

[0003] Conventional collapsible banquet-style tables that are commonly used at tradeshows can be seen in U.S. Patent Nos. 6,550,404, 6,530,331, 6,431,092, and 6,112,674. The banquet-style tables generally have a large horizontal tabletop and legs that fold up and underneath the table surface. The tables are usually very big and heavy and therefore the portability of such tables is severely limited by the large size of the tabletop. Moreover, the banquet-style tables do not have any storage or shelf space nor do they include any customizable skirts or banners. A vendor can tape or clip on a personalized banner, although if the vendor is renting the table, the owner of the venue may not allow such use of the tables.

[0004] A collapsible display table that addresses some of the above-listed problems is disclosed in U.S. Patent No. 5,865,127. U.S. Patent No. 5,865,127 is directed to a collapsible display table with a truss framework that supports a folding tabletop and a shelf. However, other than the shelf, the table according to the '127 Patent does not provide a user with very much storage space. In addition, other than the shroud shown in Fig. 16, the table according to U.S. Patent No. 5,865,127 does not disclose any type of skirt that can be used to add to the visual impact of the table. The table of this patent has many components presenting an assembly procedure which is more difficult and time consuming than is desirable.

[0005] Because the general problems discussed above have not been addressed, there is a current need for a cost-efficient collapsible table that takes up minimal space and can be easily transportable in the collapsed state. The collapsible table would preferably have no separate discrete parts and would preferably be entirely self-contained. The table further would preferably include a detachable skirt that covers the legs and shelves of the table and give the user the ability to customize the appearance of the table. Preferably, all of these goals should be achieved while at the same time the table should facilitate quick and easy setup and teardown of the collapsible table.

[0006] According to the present invention there is provided a collapsible item of furniture (for example a table) comprising: a top member (for example a tabletop) having an upper substantially flat surface and a bottom side; a plurality of foldable legs attached to the bottom side, wherein the foldable legs each have a folded position and an extended position; and a shelf slidably attached to the foldable legs.

[0007] The collapsible item of furniture according to the present invention advantageously provides a vendor with a lightweight table that is easy to set up to an erected state and to collapse to a collapsed state and that meets the needs described above.

[0008] The shelf is advantageously movable upwardly and downwardly on the foldable legs between a nested position and a use position. The shelf may be so arranged that it is movable upwardly and downwardly on the foldable legs between a nested position and a use position, when the foldable legs are in the extended position. The item of furniture may be so arranged that it is not able to move from the nested position to the use position, when the foldable legs are in the folded position.

[0009] In preferred embodiments the principal components of the item of furniture are configured as a table are interconnected and self-contained; the principle components remain part of the assembly in the collapsed state. The table preferably includes the principle components of a tabletop, at least one shelf and a plurality of folding legs. In accordance with such a preferred embodiment, the legs are attached to the tabletop and are foldable between an extended and erected position and a folded and transport position or a collapsed state. In accordance with such a preferred embodiment, the one or more shelves are slidably positioned on the legs and have a nested position adjacent to the underside of the tabletop and a use position. In the use position the shelf advantageously locks the extended legs in place. Advantageously, the table is so arranged that, when the foldable legs are in the folded position, the shelf is retained in the nested position. Preferably, a hinge or pivot point on the legs is positioned displaced down the legs from the lower surface of the tabletop a distance approximately the thickness of the shelf or shelves to define a suitable nesting region for the shelves intermediate the folded legs and the underside of the tabletop.

[0010] Preferably, a secondary shelf is provided. Thus, there may be provided a plurality of shelves. Each of the plurality of shelves is preferably slidably attached to the foldable legs. The shelf, and preferably all of the

shelves if more than one slidably attached shelf is provided, are attached so that in normal use the or each shelf is non-separable from the foldable legs.

[0011] A drawer may be attached to the underside of the tabletop or shelves, providing the vendor with multiple places to store samples, brochures, and other materials during the tradeshows. In preferred embodiments, the tabletop, the shelves, and the drawer may be moulded of plastics, for example by blow moulding.

[0012] The item of furniture, for example a table, is advantageously easy to erect and to collapse to the transport configuration by one person.

[0013] Advantageously, the item of furniture is lightweight and is a structurally strong and robust piece of furniture. Such advantageous features may be provided when the item of furniture is in the form of a table comprising blow or rotationally moulded tabletop and shelves.

[0014] A feature and advantage of a preferred embodiment of the invention is that the table is inexpensive to manufacture with lower cost materials and minimal labour.

[0015] The item of furniture advantageously includes means to aid the provision of accessories, such as means for accommodating or supporting such accessories, for example in the form of a post to support video screens or signage.

[0016] By bringing a table according to the present invention, a vendor no longer needs to rent tables at the venue of the tradeshow. The table is advantageously so configured and arranged that it has a weight and size in the collapsed state such that the table can easily be transported in the back seat or trunk of a car and can even be brought along on an airplane trip. Without the necessity of having to rent a table, the collapsible table according to the present invention is very economical and saves a vendor many rental costs normally associated with attending a tradeshow. In addition, a vendor can use a customizable skirt on the collapsible table that has a visual impact on the tradeshow attendees.

[0017] As mentioned above, the item of furniture may be a table. The item of furniture may be a collapsible podium. The item of furniture may be a stack of shelves. It will be recognized that these other configurations, such as collapsible podiums or stack of shelves, may also suitably incorporate features of the invention as described herein.

[0018] The present invention also provides a method of manufacturing a collapsible item of furniture (for example a table), the method comprising the steps of: forming a top member (for example a tabletop); forming a shelf; attaching a plurality of foldable legs to the top member, the foldable legs each having a folded position and an extended position; and slidably mounting a shelf to the foldable legs. Preferably, the shelf is mounted on the legs in such a way that the shelf is slidable on the legs between a use position distal from the top member and a nested position proximal to the top member. Preferably, the shelf is mounted on the legs in such a way that the shelf is not separable from the plurality of legs after mounting. Preferably, the forming of the top member is performed by blow-moulding. Preferably, the forming of the shelf is performed by blow-moulding. It will be appreciated that the method of manufacture may be performed in such a way as to produce an item of furniture according to any aspect of the invention described herein.

[0019] The present invention yet further provides a method of setting up a collapsible item of furniture (for example a collapsible table) according to any aspect of the invention described herein, comprising the steps providing the item of furniture with the legs in the folded position and the shelf in a captured position adjacent the top member, unfolding the plurality of legs to an extending support position, thereby releasing the shelf from the captured position; and sliding the shelf from the captured position down the legs to a stop position on the plurality of legs whereby the shelf provides structural support to the legs when in the extended position.

[0020] The item of furniture may additionally be provided with a skirt attachable to the periphery of the tabletop. In such a case, there may also be provided an enclosure for containing the collapsible table and skirt and closable to contain the collapsible table and skirt. Thus, the present invention further provides a display kit including an item of furniture according to any aspect of the invention described herein, an attachable skirt and an enclosure for containing the collapsible table and skirt.

[0021] By way of example, embodiments of the invention will now be described with reference to the accompanying drawings of which:

Fig. 1 is a top front perspective view of a collapsible table according to an embodiment of the present invention;

Fig. 2 is a top rear perspective view of a collapsible table according to an embodiment of the present invention depicting the collapsible table with a skirt;

Fig. 3 is a front elevation view of a collapsible table according to an embodiment of the present invention;

Fig. 4 is a rear elevation view of a collapsible table according to an embodiment of the present invention;

Fig. 5 is a bottom front perspective view of the tabletop of a collapsible table according to an embodiment of the present invention;

Fig. 6 is a bottom rear perspective view of the tabletop of a collapsible table according to an embodiment of the present invention;

Fig. 7 is a bottom rear perspective view of the first shelf of a collapsible table according to an embodiment of the present invention;

Fig. 8 is a top front perspective view of a drawer according to an embodiment of the present invention;

Fig. 9 is a bottom rear perspective view of a drawer according to an embodiment of the present invention;

Fig. 10 is a bottom front perspective view of a collapsible table according to an embodiment of the present invention depicting the foldable legs in a partially nested position;

Fig. 11 is a bottom side perspective view of a collapsible table according to an embodiment of the present invention depicting the foldable legs in a nested position;

Fig. 12 is a top front exploded view of a collapsible table according to the present invention;

Fig. 13 is a bottom front exploded view of a collapsible table according to the present invention;

Fig. 14 is a top front perspective view of a collapsible table according to the present invention depicting the table with a customizable skirt;

Fig. 15 is a top rear perspective view of a collapsible table according to the present invention depicting the table with a customizable skirt;

Fig. 16 is a side elevation view of a leg hinge portion according to the present invention depicting the hinge in an extended position;

Fig 17 is a side elevation view of a leg hinge portion according to the present invention depicting the hinge in a folded position; and

Fig. 18 is a perspective view of a kit comprising the invention herein.

[0022] Referring to Figures 1-17, an item of furniture configured as a collapsible table 10 is shown that provides quick and easy setup and takedown and is highly suitable for use at trade shows. The collapsible table 10 according to the present invention preferably comprises a top horizontal member configured as a tabletop 12, a shelf 14, a secondary shelf 16, a first leg 18, a second leg 20, a third leg 22, and a fourth leg 24. The table also preferably includes a customizable skirt 26 removably attached to the collapsible table 10 as depicted in Figures 14 and 15.

[0023] Referring to Figures 1 and 5, the tabletop 12 includes a working surface 30 and a tabletop underside 40 oriented parallel to the working surface 30, a tabletop front side 32, a tabletop left side 34, a tabletop rear side 36, and a tabletop right side 38. The tabletop front side 32, tabletop left side 34, tabletop rear side 36, and tabletop right side 38 define a periphery 40.1. The tabletop 12 according to the present invention further includes a tabletop aperture 42 preferably located proximate the tabletop rear side 36 and intermediate the tabletop left side 34 and tabletop right side 38 positioned for use as a wire conduit or a holder for a post for signage or a video or message screen. A slot 44 located proximate the tabletop right side 38 and intermediate the tabletop front side 32 and tabletop rear side 36 may be used such as for a business card deposit slot. A skirt flange 46 follows the periphery 40.1 at the tabletop underside 40, and a drawer 48 slidably engageable with the tabletop 12.

[0024] As best illustrated in Figures 1, 3, 4, 12, and 13, the tabletop 12 further includes a left hanger 50 and a right hanger 52 securely mounted to the tabletop underside 40. The hangers are preferably blow-moulded thermoplastic and are connected to the tabletop underside 40 proximate the tabletop front side 32 using screws. The hangers can also be connected to the tabletop underside 40 with bolts, nails, rivets, by welding or other fastening means. Alternatively, the hangers can be integrally formed with the tabletop 12, for example during the moulding process.

[0025] The skirt flange 46 as can be seen in Figure 5 comprises a flange outer surface 54 and a flange inner surface 56 and is preferably integrally attached to the tabletop 12. The skirt flange 46 projects from the tabletop underside 40 and extends along the tabletop left side 34, tabletop rear side 36, and tabletop right side 38. It is contemplated that the skirt flange 46 be integral with the tabletop 12. The skirt flange 46 may extend fully or partially around the periphery 40.1. There is preferably a plurality of support members 58 that are integral with the flange inner surfaces 56 and the tabletop underside 40 that provide the skirt flange 46 and tabletop 12 with added rigidity and strength.

[0026] Referring to Figures 5 and 6, the tabletop includes a first channel 60 and a second channel 62 extending lengthwise on the tabletop underside 40. The first channel 60 is located proximate the tabletop front side 32 and substantially spans between the tabletop left side 34 and the tabletop right side 38. The second channel 62 is located proximate the tabletop rear side 36 and substantially spans intermediate the tabletop left side 34 to the tabletop right side 38. The first channel 60 and the second channel 62 preferably include a plurality of channel touch-offs 64 preferably spaced equidistantly within the channels providing the channels with added stability. The channel touch-offs 64 project upwardly towards the working surface 30 and are preferably rigidly melted or welded to the working surface 30.

The channel touch-offs 64 may come into contact with the working surface 30 without melting or welding to the working surface 30.

[0027] Referring to Figures 5, 6, 10, and 13, the tabletop underside 40 further includes a left drawer support 66, a right drawer support 68, and at least one drawer stop 70. The left drawer support 66 and the right drawer support 68 are oriented in a direction from the tabletop front side 32 to the tabletop rear side 36 and the left drawer support 66 and the right drawer support 68 are preferably parallel to one another other. The left drawer support 66, right drawer support 68, and at least one drawer stop 70 are preferably integrally attached to the tabletop 12 but can be constructed of metal, thermoplastics, or other conventional materials and rigidly connected to the tabletop 12 with screws, bolts, rivets, or other fastening means. There is preferably a left slide 72 attached to the left drawer support 66 and a right slide 74 rigidly attached to the right drawer support 68. The slides are preferably conventionally constructed of steel or aluminium and are connected to the drawer supports with bolts or screws. The at least one drawer stop 70 is integrally attached to the tabletop underside 40 and is located proximate the tabletop rear side 36 and intermediate the left track 66 and the right track 68. The tabletop underside 40 may further include a latch catch 76 located proximate the tabletop front side 32 and intermediate the left drawer support 66 and the right drawer support 68.

[0028] Still referring to Figures 5, 6, 10, and 13, the tabletop underside 40 may include a plurality of tabletop touch-offs 78. The tabletop touch-offs 78 are generally dispersed about the tabletop bottom surface 40 and formed into the tabletop 12 during the manufacturing process to add further stability and support to the tabletop 12. The tabletop touch-offs 78 project upwardly from the tabletop underside 40 towards the working surface 30 and are preferably rigidly melted or welded to the working surface 30. However, it is also contemplated that the tabletop touch-offs 78 come into contact with the working surface 30 without melting or welding to the working surface 30.

[0029] The tabletop 12 is preferably manufactured by blow-moulded thermoplastic such as polyethelene. However, it is contemplated that the tabletop 12 be manufactured using injection moulding, rotational moulding, or other methods of thermoplastic forming. In other embodiments of the present invention, the tabletop 12 and shelves could be constructed of materials such as wood, wood products, metal, or other materials.

[0030] Referring to Figures 8 and 9, the drawer 48 has a drawer front edge 80 and a drawer rear edge 82, a drawer left side 84, a drawer right side 86, a drawer top surface 87, and a drawer bottom side 88. The drawer 48 may have an utensil tray 90 located proximate the drawer front edge 80, a drawer handle 92 located on the drawer front edge 80, and a main tray 94 having a tray bottom surface 96. The drawer 48 includes a left flange 98 that projects from the drawer left side 84 and extends from the drawer front edge 80 to the drawer rear edge 82 and a right flange 100 that projects from the drawer right side 86 and extends from the drawer front edge 80 to the drawer rear edge 82. The drawer 48 also preferably includes a latch configured as a detent 102 that projects from the drawer top surface 87 and is located at a position intermediate the drawer left side 84 and the drawer right side 86. The drawer bottom side 88 preferably includes a plurality of reinforcing recesses 104. As shown in Figure 9, the plurality of reinforcing recesses 104 are preferably parallel to each other and extend between the drawer left side 84 and the drawer right side 86. The reinforcing recesses 104 extend between the drawer bottom side 88 and the tray bottom surface 88. The drawer 48 preferably includes at least one drawer touch-off 106 extending between the drawer bottom side 88 and the tray bottom surface 96.

[0031] The drawer 48 is slidably engageable with the tabletop 12. The left flange 98 slidably engages with the left hanger 50 and a left slide and the right flange 100 slidably engages with the right hanger 52 and right slide. As the drawer 48 slides from the tabletop front side 32 towards the tabletop rear side 36, the left flange 98 slidably engages with the left slide and the right flange 100 slidably engages with the right slide. The drawer 48 preferably slides completely into the tabletop 12 until the drawer rear edge 82 comes into contact with the at least one drawer stop 70. When the drawer 48 is completely into the tabletop 12, as seen in Figure 1, the drawer rear edge 82 is in contact with the at least one drawer stop 70 and the drawer front edge 80 is preferably flush with the tabletop front side 32. The drawer 48 rests on the left hanger 50, the right hanger 52, the left slide, and the right slide. The detent 102 engages with the latch catch 76 to prevent the drawer 48 from freely sliding out of the tabletop 12.

[0032] The drawer 48 is preferably blow-moulded thermoplastic. However, the drawer 48 could alternatively be manufactured using injection moulding, rotational moulding, or other methods of thermoplastic forming. In other embodiments of the present invention, the drawer 48 could be constructed of materials such as wood, metal or wood products.

[0033] Referring to Figures 1, 2, 3, 10, 11, 12, and 13, the plurality of legs comprises the first leg 18, the second leg 20, the third leg 22, and the fourth leg 24. Each include a proximal or top portion 108, a distal or bottom or folding portion 110, a stop portion 112, and a pivot or hinge portion 114. As seen in Figure 12, each top portion 108 includes a head 116 and a top hinge end 118. Each bottom portion 110 includes a foot 120 and a bottom hinge end 122. The foot 120 preferably includes a foot cap 124 slidably engageable with the foot 120.

[0034] The hinge portion 114 can be seen in Figures 16 and 17 and includes a top hinge portion 126 and a bottom hinge portion 128 each with attachment divots 129. The top hinge portion 126 and the bottom hinge

portion 128 are pivotally attached with a pin or bolt. The bottom hinge portion 128 has a stop surface 120 that cooperates with a stop surface 131 on the top hinge portion 126 to allow the hinge to open to only 180°. The bottom hinge portion 128 is slidably joined to the bottom hinge end 122 and the top hinge portion 126 is slidably joined to the top hinge end 118. When the hinge portion 114 is joined to the top portion 108 and the bottom portion 110, the top portion 108 and the bottom portion 110 are pivotable about the pin or bolt connecting the top hinge portion 126 and the bottom hinge portion 128. The top portions 108 and the bottom portions 110 of the second leg 20, third leg 22, and fourth leg 24 are preferably connected in a similar manner.

[0035] The top portion 108 of each leg is preferably shorter than the bottom portion 110. The overall length of the first leg 18, the second leg 20, the third leg 22, and the fourth leg 24 are preferably equal. The top portions 108 of the first leg 18 and the second leg 20 are preferably equal in length and preferably slightly shorter than the top portions 108 of the third leg 22 and the fourth leg 24. The bottom or folding portions 110 of the third leg 22 and the fourth leg 24 are preferably equal in length and slightly shorter than the bottom portions 110 of the first leg 18 and the second leg 20. The first leg 18, second leg 20, third leg 22, and fourth leg 24 each include a stop portion 112 located proximate the bottom hinge ends 122. The stop portion 112 is preferably comprised of a first half 129 and a second half 130 and the stop portions 112 are generally connected to the legs with a bolt or screw.

[0036] The first leg 18, second leg 20, third leg 22, and fourth leg 24 are preferably constructed of steel tubing and can be attached to the hinge portion by inserting the top or bottom hinge portion inside the tubing and deforming the tubing at the divots, but can be constructed of other metals, thermoplastics, wood, composite, or other suitable materials.

[0037] The first leg 18 is preferably rigidly connected to the second leg 20 with a first support bar 132. The third leg 22 is preferably rigidly connected to the fourth leg 24 with a second support bar 134. The first support bar 132 and the second support bar 134 are preferably constructed of tubular steel but could be constructed of other metals, thermoplastics, wood, or other suitable materials. The legs can be connected to the support bars using a number of different methods, including but not limited to weldaments, screws, bolts, clamps or other connecting means.

[0038] The first leg 18 is rigidly connected to the fourth leg 24 with a first connection member 136. The second leg 20 is rigidly connected to the third leg 22 with a second connection member 138. The first connection member 136 and second connection member 138 are preferably constructed of stamped steel but could be constructed of aluminium, thermoplastic, wood, or wood products. The first leg 18 could also be hingedly attached to the fourth leg 24 with the first connection member 136 and the second leg 20 could be hingedly attached to the third leg 22 with the second connection member 138.

[0039] The first connection member 136 and the second connection member 138 are rigidly connected to the tabletop 12. The first connection member 136 slidably engages with the first channel 60 and the second connection member 138 slidably engages with the second channel 62. The first connection member 136 and second connection member 138 are then preferably rigidly connected to the channels with screws or bolts.

[0040] Referring to the figures, particularly Figures 1, 7, 12, and 13, details of the shelves 14 and 16 are illustrated. The shelves includes a shelf top surface 140, a shelf bottom surface 142, a shelf front edge 144, a shelf rear edge 146, a shelf left side 148, and a shelf right side 150. The shelf top surface 140 and the shelf bottom surface 142 are generally parallel or have parallel portions to each other. The shelf front edge 144, shelf rear edge 146, shelf left side 148, and shelf right side are generally oriented perpendicularly to the shelf top surface 140 and the shelf bottom surface 150. The shelf also preferably includes a first leg aperture 152, a second leg aperture 154, a third leg aperture 156, a fourth leg aperture 158, and shelf orifice 160. The first leg aperture 152 is located proximate the intersection of the shelf front edge 144 and the shelf left side 148. The second leg aperture 154 is located proximate the intersection of the shelf left side 148 and the shelf rear edge 146. The third leg aperture 156 is located proximate the intersection of the shelf rear edge 146 and the shelf right side 150. The fourth leg aperture 158 is located proximate the intersection of the shelf right side 150 and the shelf front edge 144. The leg apertures are preferably slightly smaller in size than the stop portions 112. It is contemplated that the leg apertures comprise a grommet that is slidably inserted into the apertures. The shelf also includes a shelf orifice 160 that, as shown in the figures, is located proximate the tabletop rear edge 146 and intermediate the shelf left side 148 and the shelf right side 150, but could be located on any portion of the shelf 14.

[0041] The shelf bottom surface 142 includes a first support bar cutout 162 and a second support bar cutout 164. The first support bar cutout 162 preferably spans the distance between the first leg aperture 152 and the second leg aperture 154 and is substantially the same size as the first support bar 132. The second support bar cutout 164 spans the distance between the third leg aperture 156 and the fourth leg aperture 158 and is substantially the same size as the second support bar 134. The first support bar cutout 162 and a second support bar cutout 164 preferably include a plurality of cutout touch-offs 166 providing the cutouts with added stability. The cutout touch-offs 166 project upwardly from the cutouts to the shelf top surface 140 and are preferably rigidly melted or welded to the shelf top surface 140. However, it is also contemplated that the cutout touch-offs

166 come into contact with the shelf top surface 140 without melting or welding to the shelf top surface 140.

[0042] The shelf bottom surface 142 further preferably includes at least one strengthening recess 168. The at least one strengthening recess 168 preferably spans a distance slightly less than the distance between the first support bar cutout 162 and the second support bar cutout 164. The at least one strengthening recess 168 projects upwardly from the shelf bottom surface 142 and are preferably rigidly melted or welded to the shelf top surface 140. However, it is also contemplated that the at least one strengthening recess 168 comes into contact with the shelf top surface 140 without melting or welding to the shelf top surface 140.

[0043] The shelf bottom surface 142 further includes a plurality of shelf touch-offs 170 preferably located around the perimeter of the shelf 14. The shelf touch-offs 170 are generally formed in the shelf 14 during the manufacturing process and add further stability and support to the shelf 14. The shelf touch-offs 170 project upwardly from the shelf bottom surface 142 towards the shelf top surface 140 and are preferably rigidly melted or welded to the shelf top surface 140. However, it is also contemplated that the shelf touch-offs 170 come into contact with the shelf top surface 140 without melting or welding to the shelf top surface 140.

[0044] The secondary shelf 16 has substantially the same structure as the shelf 14. The secondary shelf 16 includes a first leg aperture 152, a second leg aperture 154, a third leg aperture 156, a fourth leg aperture 158, and a shelf orifice 160. The leg apertures on the secondary shelf are larger than the stop portions 112. The bottom surface 142 on the secondary shelf 16 also includes a first support bar cutout 162, a second support bar cutout 164, at least one strengthening recess 168, and a plurality of shelf touch-offs 170. Because the shelf 14 and the secondary shelf 16 include substantially the same features, the shelf 14 and the secondary shelf 16 can be interchangeable.

[0045] The shelf 14 and secondary shelf 16 are preferably blow moulded thermoplastic, such as polyethylene and thus each of the tabletop, shelves and drawer are generally hollow. The shelf 14 and secondary shelf 16 could alternatively be manufactured using injection moulding, rotational moulding, or other methods of thermoplastic forming. In one embodiment of the present invention the shelf 14 and secondary shelf 16 could be constructed of materials such as metal, wood, or wood products.

[0046] The customizable skirt 26 is depicted in Figures 14 and 15. The skirt 26 is preferably removably connected to the skirt flange 46 using hook and loop fasteners ("Velcro®"). It is contemplated that the skirt 26 be connected to the skirt flange 46 in a number of other ways, including but not limited to, magnetic strips, clamps, clips, snaps or other conventional attachment means. The skirt 26 is preferably connected to the collapsible table 10 in a manner that allows the user to remove and attach the skirt 26 quickly. The skirt 26 is preferably constructed of sheet material such as fabric, but can be constructed of wood products, paper, or plastic. The skirt 26 allows a user to customize the appearance of the collapsible table 10.

[0047] To initially assemble the collapsible table 10, the secondary shelf 16 is placed onto the legs. At this point, the stop portions 112 are not yet connected to the legs. Also, at this point, the first leg 18 is not connected to the fourth leg 24 with the first brace member 136 and the second leg 20 is not connected to the third leg 22 with the second brace member 138. The first leg 18 slides into the first leg aperture 152 of the secondary shelf 16. The second leg 20 slides into the second leg aperture 154 of the secondary shelf 16. The third leg 22 slides into the third leg aperture 156 of the secondary shelf 16. The fourth leg 24 slides into the fourth leg aperture 158 of the secondary shelf 16. The secondary shelf 16 slides down the legs over the top portions 108 and the bottom portions 110 until the secondary shelf 16 lands onto the first support bar 132 and the second support bar 134. When the secondary shelf 16 is resting on the support bars, the first support bar 132 slidably fits into the first support bar cutout 162 of the secondary shelf 16 and the second support bar 134 slidably fits into the second support bar cutout 164 of the secondary shelf 16. Preferably the support bars are substantially the same size as the support bar cutouts and the support bars and support bar cutouts frictionally fit together.

[0048] After the secondary shelf 16 has been placed onto the legs and the secondary shelf 16 is resting on the support bars, the first half 128 and second half 130 of the stop portions 112 are connected to the legs. The stop portions are preferably constructed of injection-moulded thermoplastic and are connected to the legs with screws. The stop portions 112 could also be connected to the legs using a number of different methods, including but not limited to screws, bolts, rivets, or other suitable connecting means.

[0049] Next, the shelf 14 is placed onto the legs. The first leg 18 slides into the first leg aperture 152 of the shelf 14. The second leg 20 slides into the second leg aperture 154 of the shelf 14. The third leg 22 slides into the third leg aperture 156 of the shelf 14. The fourth leg 24 slides into the fourth leg aperture 158 of the shelf 14. The shelf 14 slides down the legs until the shelf 14 lands onto the stop portions 112. Because the shelf apertures are slightly smaller in size than the stop portions 112, the stop portions 112 hold the shelf 14 vertically in position.

[0050] The first leg 18 and the fourth leg 24 are then rigidly connected with the first brace member 136. The first brace member 136 is preferably connected to the first leg 18 and the fourth leg 24 using weldaments. The second leg 20 and the third leg 22 are rigidly connected with the second brace member 138. The second brace member 138 is preferably connected to the second leg 20 and the third leg 22 using weldaments. Finally, the

legs and brace members are rigidly connected to the tabletop. The first brace member 136 is connected to the first channel 60 using bolts or screws. The second brace member 138 is rigidly connected to the second channel 62 using bolts or screws.

[0051] Once the collapsible table 10 is assembled, it can be used in an upright use position for using the collapsible table 10 or collapsed into a nested position for easy storage or transport. To collapse the table 10 into the nested position, the skirt 26 is removed from the skirt flange 46. Next, the table 10 is arranged so that the working surface 30 is facing downward or on the ground. The shelf 14, with the aid of gravity and the user, will fall downward and pass slide over the leg top portions 108 so that the top surface 140 of the shelf 14 lies adjacent to the tabletop underside 40. As the shelf 14 falls downward, it remains substantially parallel to the tabletop 12.

[0052] Next, the secondary shelf 16, with the aid of gravity and the user, will fall so that the top surface 140 of the secondary shelf 16 slides over the legs bottom portions 110, the stop portions 112, the top portions 108, and the top surface 140 of the secondary shelf 16 will come into contact with the bottom surface 142 of the shelf 14. As the secondary shelf 16 falls downward, it remains substantially parallel to the tabletop 12.

[0053] After that, the two legs with the shorter top portions 108, the first leg 18 and second leg 20 as depicted in the figures, are folded from the extended portion to a folded position such that the top portion 108 is substantially perpendicular to the bottom portion 110. The legs will hold the shelf 14 and secondary shelf 16 into a nested position. Finally, the two legs with longer top portions 108, the third leg 22 and the fourth leg 24 as depicted in the figures, are folded from the extended position to a folded position such that the top portion 108 is substantially perpendicular to the bottom portion 110. The third leg 22 and fourth leg 24 being folded from an extended position to a folded position can be seen in Figures 14-17. The table in a fully collapsed state can be seen in Figures 18-20. When the table 10 is in the fully collapsed state, the legs retain the shelves in a nested position.

[0054] To reverse the procedure and set the collapsible table 10 up into its use position, the third leg 22 and the fourth leg 24 are unfolded from a folded position to an extended position. Then the first leg 18 and second leg 20 are unfolded from their folded position to an extended position. The table 10 is then flipped over so that the feet 120 on the first leg 18, second leg 20, third leg 22, and fourth leg 24 are on the ground.

[0055] The secondary shelf 16 will slide down the legs over the top portions 108 and the bottom portions 110 until the secondary shelf 16 lands onto the first support bar 132 and the second support bar 134. When the secondary shelf 16 is resting on the first support bar 132 and second support bar 134, the first support bar 132 slidably fits into the first support bar cutout 162 of the secondary shelf 16 and the second support bar 134 slidably fits into the second support bar cutout 164 of the secondary shelf 16. Because the support bars are substantially the same size as the support bar cutouts, the support bars and support bars frictionally fit together.

[0056] Next, the shelf 14 slides down the legs over the top portions 108 until the shelf 14 lands onto the stop portions 112. Because the leg apertures on the shelf 14 are slightly smaller in size than the stop portions 112, the shelf is wedged onto the stop portions 112 and the stop portions 112 preclude the shelf 14 past the stop portions 112. When in the use position, the shelf 14 and the secondary shelf 16 provide the table with stability and lock the foldable legs into place. Finally, the customizable skirt 26 may be attached to the skirt flange 46 with Velcro®.

[0057] Although the table 10 according to the present invention is depicted and described comprising four legs, it is contemplated that the table could be constructed with as few as two legs. For example, the table could be constructed of two, three, five, or any other number of legs and still embody the inventive features of the present invention.

[0058] Referring to Figure 18, the table is highly suitable for use as a display table at a trade show. As such, the invention also includes the "kit" of an enclosure such as a bag 200 along with the collapsible table 10 and skirt 26. The collapsed table and folded skirt fit with the closeable container such as a bag 200.

[0059] Referring to Figures 1 and 2, the apertures 42, 106, 160 may support a post 220 that supports a display device 222 such as a flat screen or signage.

[0060] It will be appreciated that the present invention may be embodied in other specific forms different from that described above with reference to the drawings.

Claims

1. A collapsible table comprising:

a tabletop having a working surface and a bottom side;

a plurality of foldable legs attached to the bottom side, wherein the foldable legs each have a folded position and an extended position; and

a shelf slidably attached to the foldable legs, the shelf movable upwardly and downwardly on the foldable legs between a nested position and a use position when the foldable legs are in the extended position.

2. The collapsible table of claim 1, whereby the shelf remains substantially parallel to the tabletop as it moves upwardly and downwardly on the foldable legs between the nested position and the use position.

3. The collapsible table of any of claims 1 or 2, wherein the foldable legs have a stop portion and wherein when the legs are in the extended position the stop portion precludes the shelf from moving downward past said stop portion.

4. The collapsible table of any of claims 1 through 3, wherein when the shelf is in the nested position the shelf lays adjacent to the bottom side of the tabletop and wherein when the shelf is in the use position the shelf rests on the stop portions.

5. The collapsible table of any of claims 1 through 4, wherein when the shelf is in the use position, the shelf locks the foldable legs into place.

6. The collapsible table of any of claims 1 through 6, wherein the shelf is non-separable from the legs.

7. A collapsible table comprising:

a tabletop having a working surface and a bottom side;

a plurality of foldable legs attached to the bottom side, wherein the foldable legs each have a folded position and an extended position;

a shelf slidably attached to the foldable legs, the shelf movable upwardly and downwardly on the plurality of legs between a use position and a nested position, and wherein when the foldable legs are in the folded position the shelf is retained in the nested position.

8. The collapsible table of claim 7, wherein when the shelf is in the nested position, the shelf lays adjacent to the bottom side of the tabletop.

9. The collapsible table of any of claims 7 and 8, wherein the shelf is non-separable from the legs.

10. A collapsible table comprising:

a tabletop having a working surface and a bottom side;

a plurality of foldable legs attached to the bottom side, the legs each having a folded position and an extended position;

a shelf slidably attached to the foldable legs; and

a secondary shelf slidably attached to the foldable legs.

11. The collapsible table of claim 10, wherein the shelf and the secondary shelf are movable upwardly and downwardly on the foldable legs between a nested position and a use position when the foldable legs are in the extended position.

12. The collapsible table of claim 10 or 11, whereby the shelf and the secondary shelf remain substantially parallel to the tabletop as the shelf and the secondary shelf move upwardly and downwardly on the foldable legs between the nested position and the use position.

13. The collapsible table of claim 10, 11, or 12 wherein when the shelf and the secondary shelf are in the use position, the shelf locks the foldable legs into place.

14. The collapsible table of claim 10, 11, 12, or 13, wherein the foldable legs have a stop portion wherein when the legs are in the extended position the stop portion precludes the shelf from moving downward past said stop portion.

15. The collapsible table of any of claims 10 through 14, wherein the foldable legs have a secondary stop portion and wherein when the legs are in the extended position the stop portions preclude the secondary shelf from moving downward past said secondary stop portion.

16. The collapsible table of any of claims 10 through 15, wherein when the foldable legs are in the folded position the shelf and the secondary shelf are retained in the nested position.

17. The collapsible table of any of claims 10 through 16, wherein the shelf and the secondary shelf are non-separable from the legs.

18. A collapsible table comprising:

a tabletop having a working surface and a bottom side;

a plurality of foldable legs attached to the bottom side, the legs each having a folded position and an extended position; and

a shelf slidably attached to each of the foldable legs, wherein the shelf is non-separable from the foldable legs.

19. The collapsible table of claim 18 having a secondary shelf slidably attached to each of the foldable legs.

20. The collapsible table of claim 19, wherein the secondary shelf is non-separable from the foldable

legs.

21. A method of manufacturing a collapsible table, the method comprising the steps of:

forming a table top;

forming a shelf;

attaching legs to the table top such that they have an extended support position and are foldable to a retracted position; and

slidably mounting a shelf on the plurality of legs, with the shelf slidable on the legs between a use position distal from the tabletop and a nested position proximal to the tabletop such that the shelf is not separable from the plurality of legs after mounting.

22. The method of claim 21, further comprising the step of blow-moulding the tabletop.

23. The method of claim 21 or 22, further comprising the step of blow-moulding the shelf.

24. The method of any of claims 21 through 23, further comprising the step of forming a secondary shelf and slidably mounting a shelf on the plurality of legs.

25. A method of manufacturing a collapsible table, the method comprising the steps of:

blow-moulding a table top;

blow-moulding a shelf with four apertures for table legs;

attaching legs to the table top such that they have an extended support position and are foldable to a retracted position; and

slidably mounting the shelf on the plurality of legs extending through the four openings, the shelf slidable on the legs between a use position distal from the table top and a nested position proximal to the table top such that the shelf is not separable from the plurality of legs after mounting.

26. The method of claim 25, further comprising the step of blow-moulding a secondary shelf with four apertures for table legs and slidably mounting said secondary shelf on the plurality of legs extending through the four openings, the secondary shelf slidable on the legs between a use position distal intermediate from the tabletop and the shelf, and a nested position proximal intermediate from the tabletop and the shelf.

27. The method of claim 26, further comprising the step of securing the tabletop, shelf, and secondary shelf to the legs so that they are not separable therefrom after mounting.

28. A method of setting up a collapsible table comprising the steps of:

unfolding a plurality of legs attached to a table top to an extending support position thereby releasing at least one shelf from a captured position adjacent the table top; and

sliding the shelf from the captured position adjacent the table top down the plurality of legs to a stop position on the plurality of legs whereby the shelf provides structural support to the legs when in the extended position.

29. A display kit comprising:

a) a collapsible table comprising:

a tabletop with an underside and a periphery;

a plurality of foldable legs attached to the underside; and

a shelf slidably engaged with the foldable legs the shelf movable between the nested position adjacent the underside of the tabletop and a use position distally positioned on the legs;

b) a skirt attachable to the periphery of the tabletop; and

c) an enclosure sized for containing the collapsible table and skirt and closable to contain the collapsible table and skirt.

30. A collapsible item of furniture having a collapsed state and a fully erected state, the piece of furniture comprising:

a top horizontal member with a upwardly facing substantially flat use surface and an underside; and

a plurality of foldable legs attached to the underside of said top horizontal member, the foldable legs each having a lower folding portion wherein folded position wherein the foldable portion of said legs lay substantially parallel to the top horizontal member, and an extended

position where the foldable portion of said legs extend downwardly for engagement with a floor surface,

the piece of furniture further **characterized in that** a lower shelf member is slidingly engaged with the foldable legs and movable between a nesting position when the piece of furniture is in the collapsed state wherein the lower shelf member lays in proximity to underside of the top horizontal member intermediate said top horizontal member and the foldable portions of said folded legs and a use position wherein the lower shelf member is slid down the legs to a use position below the nesting position.

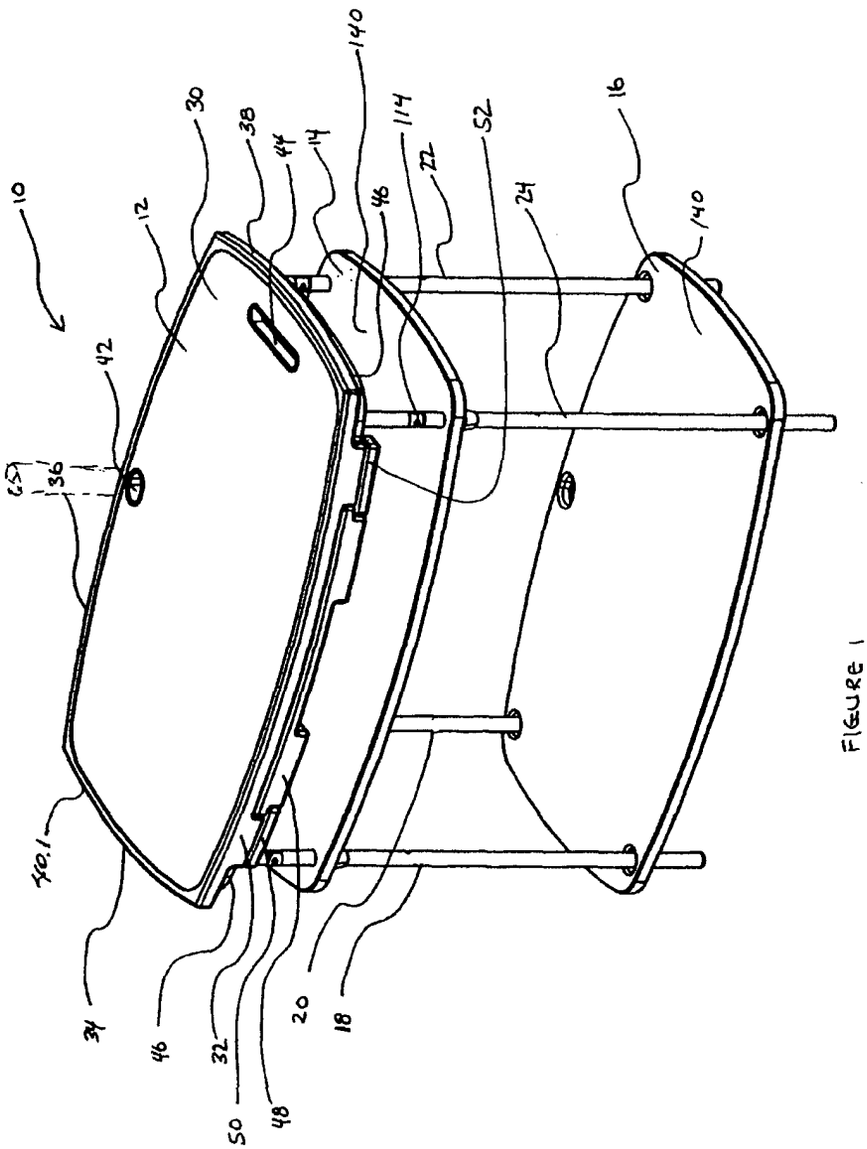
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FIGURE 1

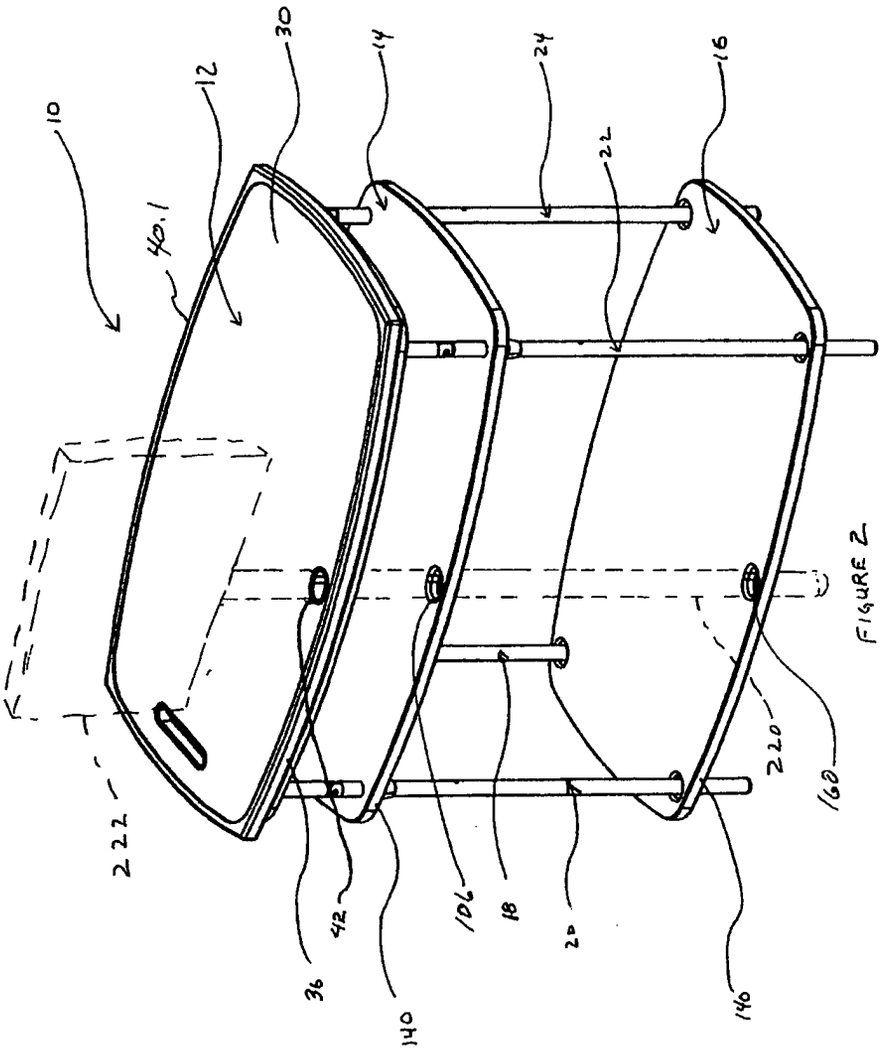
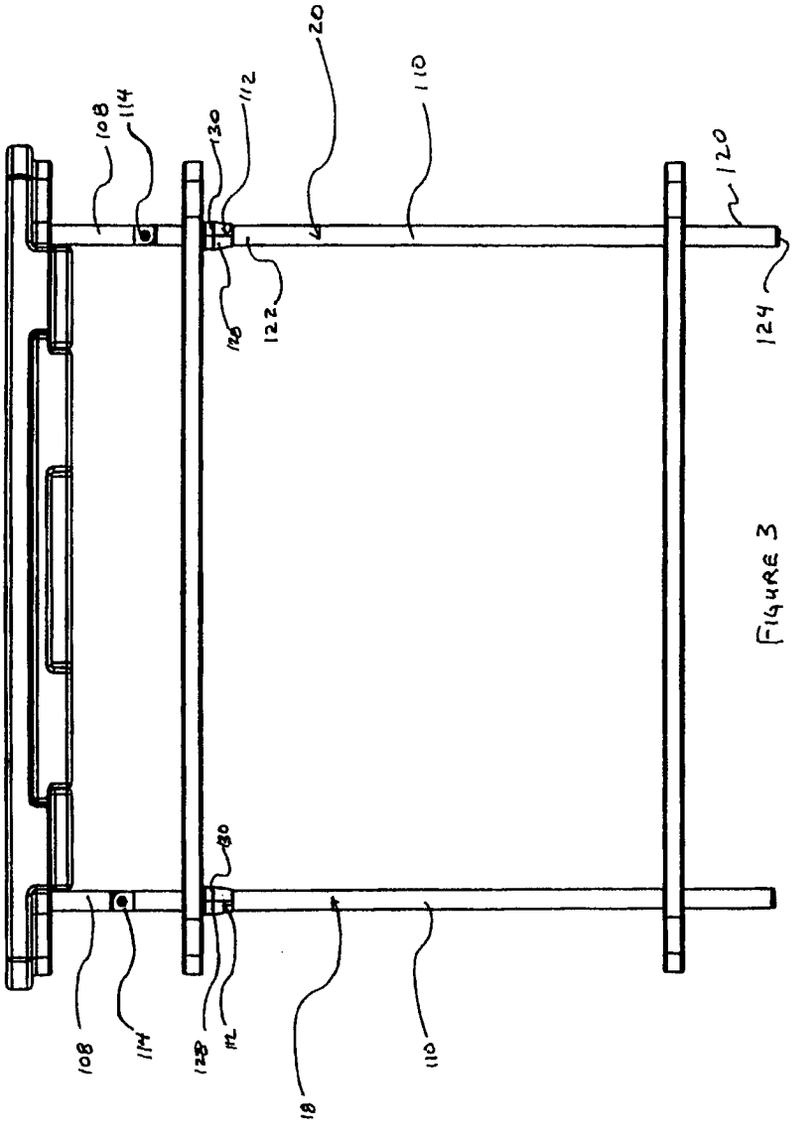


FIGURE 2



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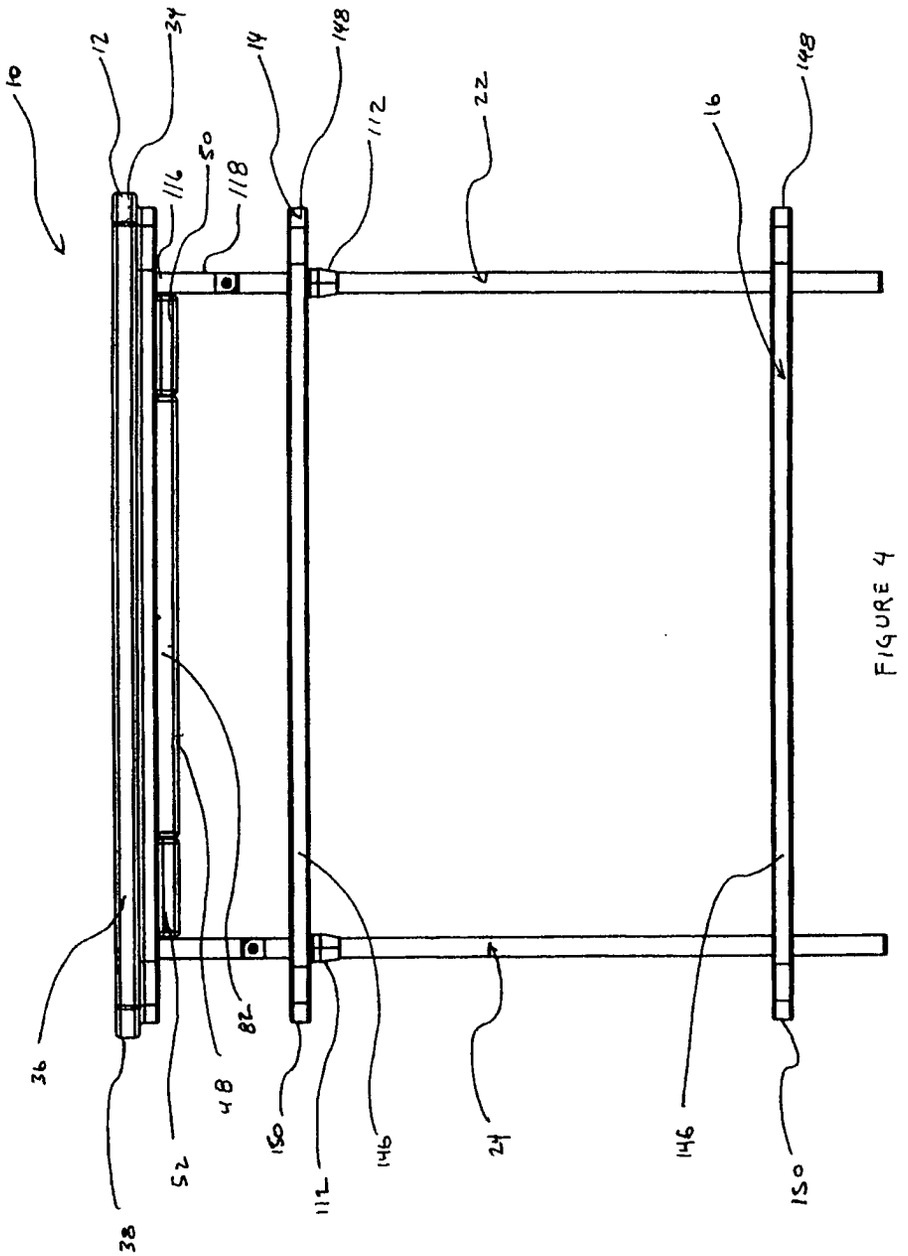
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FIGURE 4

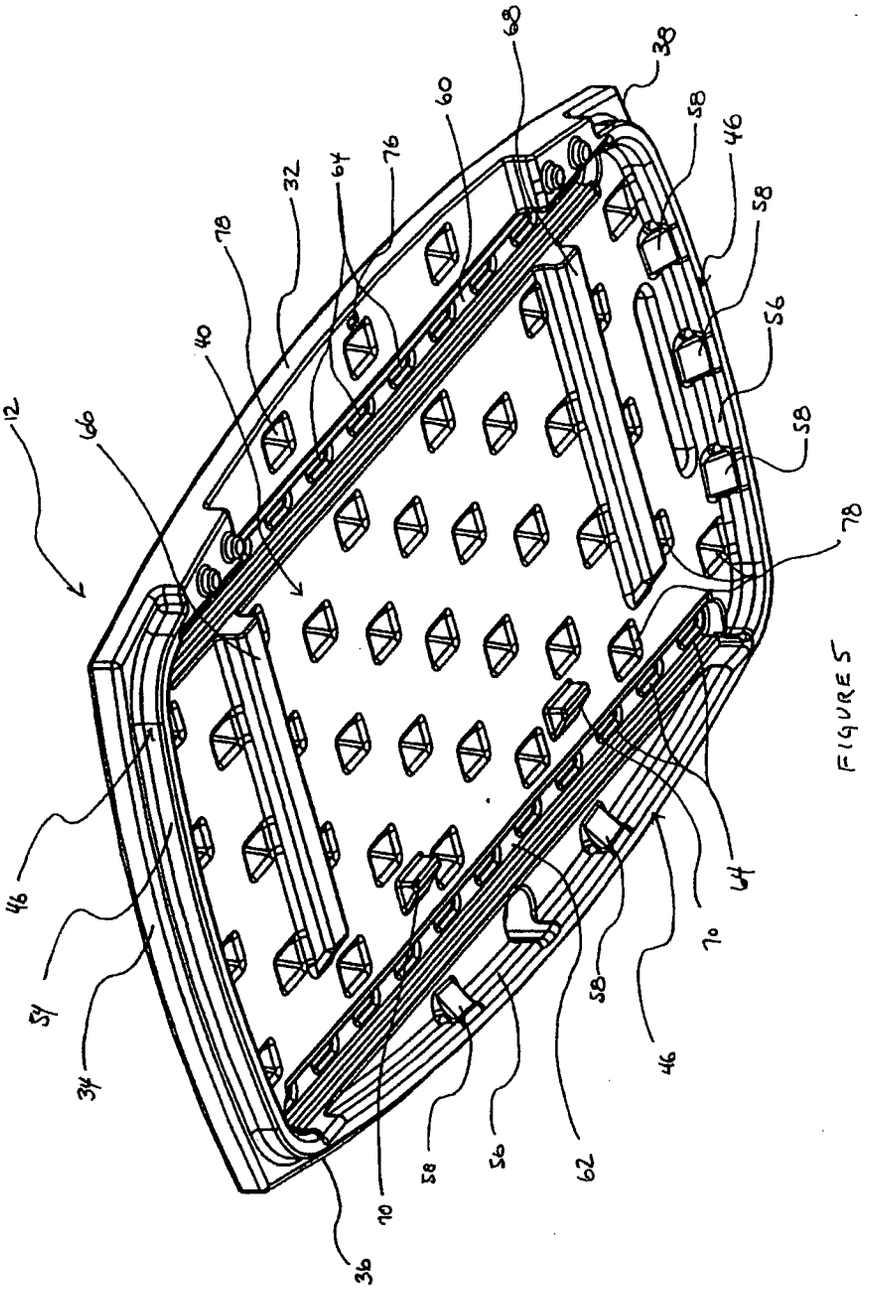
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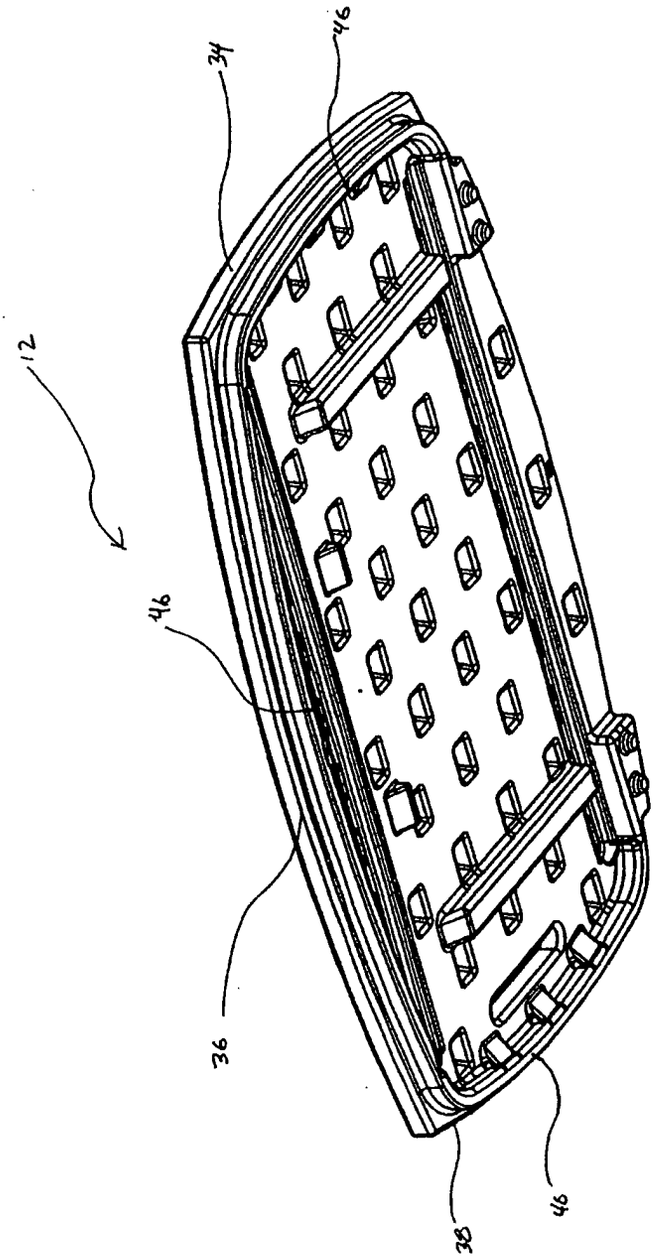
FIGURE 5



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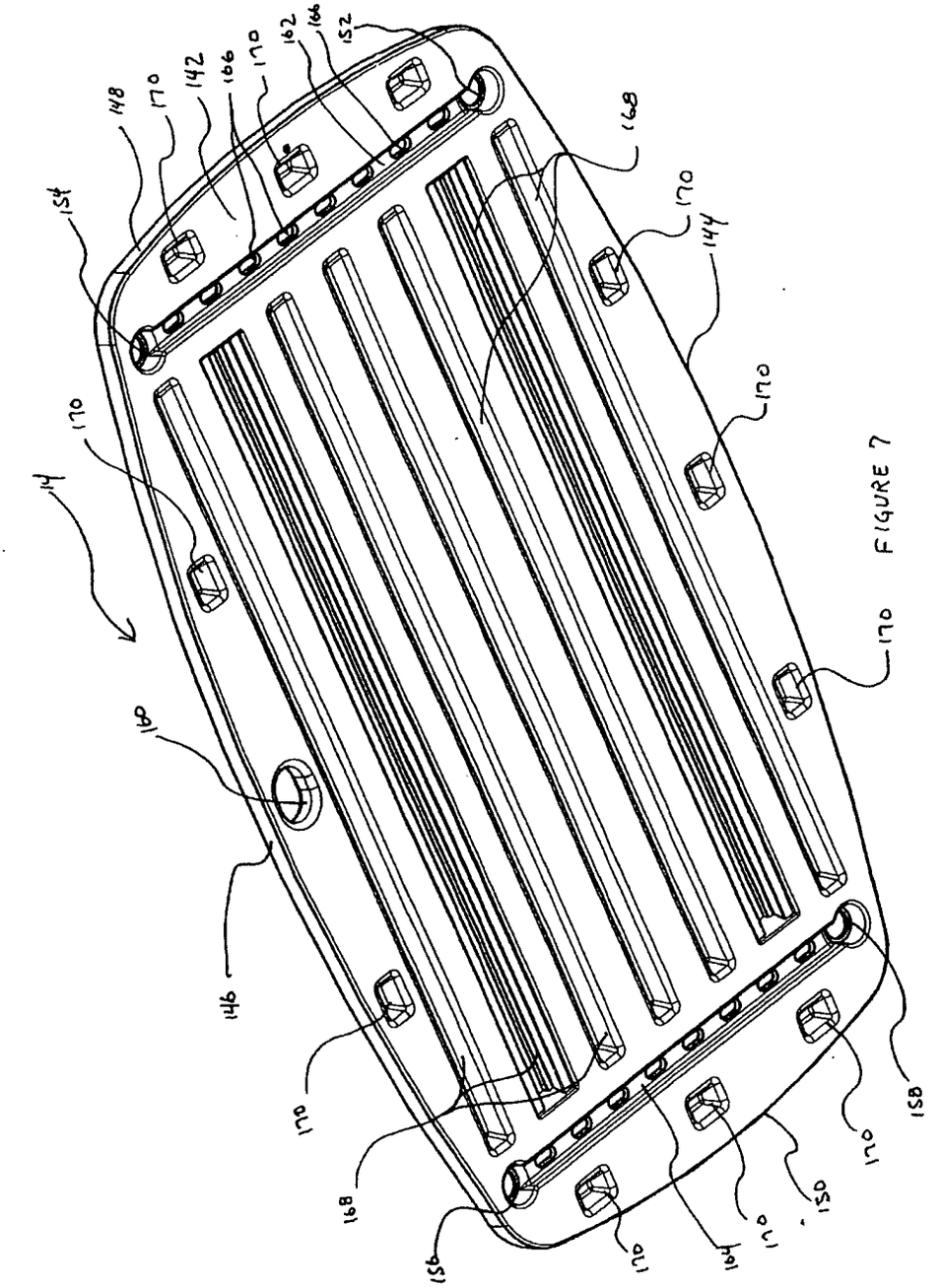
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FIGURE 7

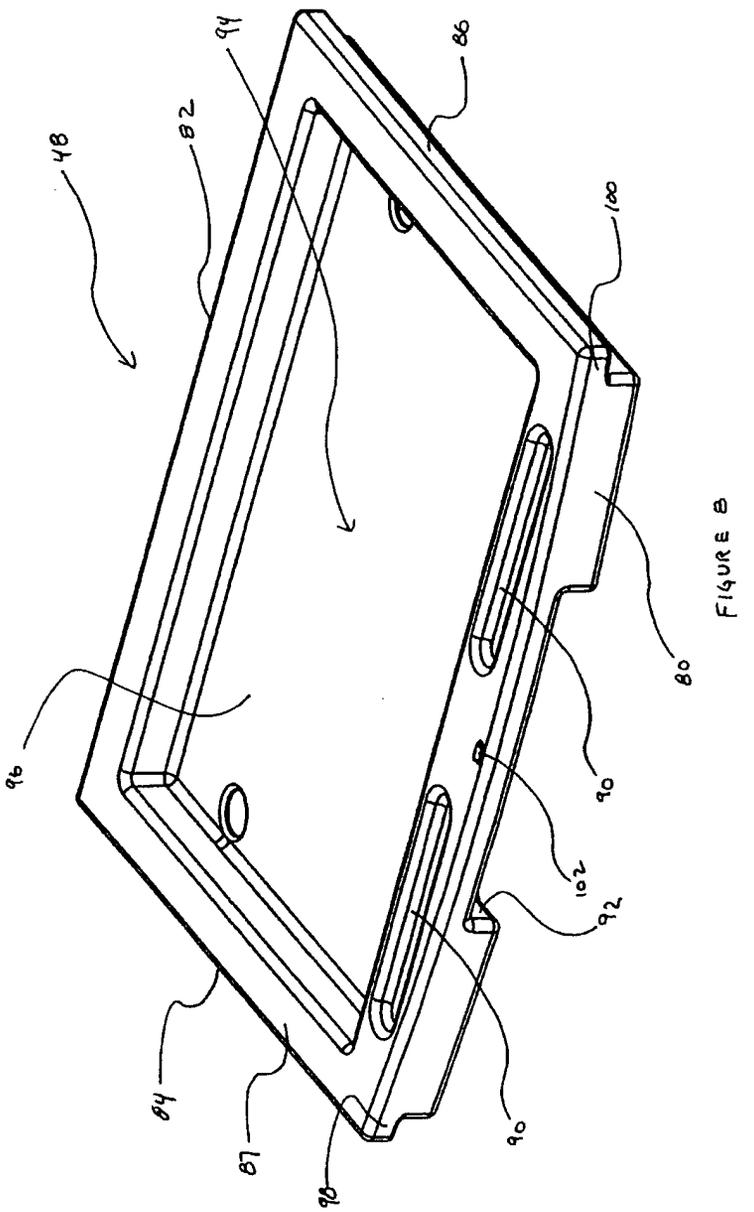


FIGURE 8

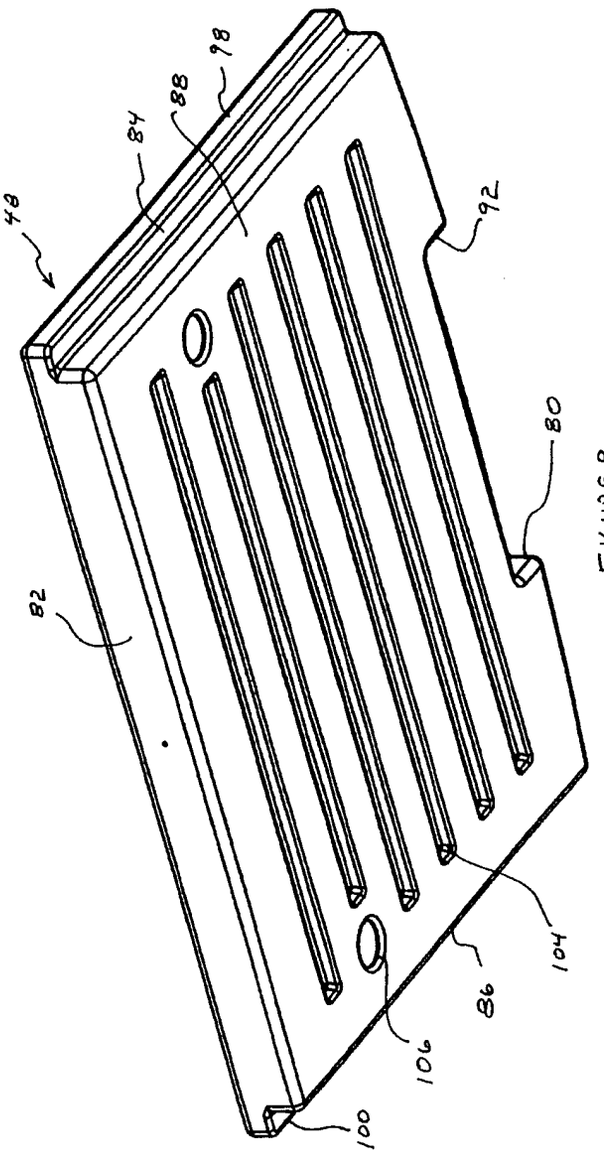


FIGURE 9

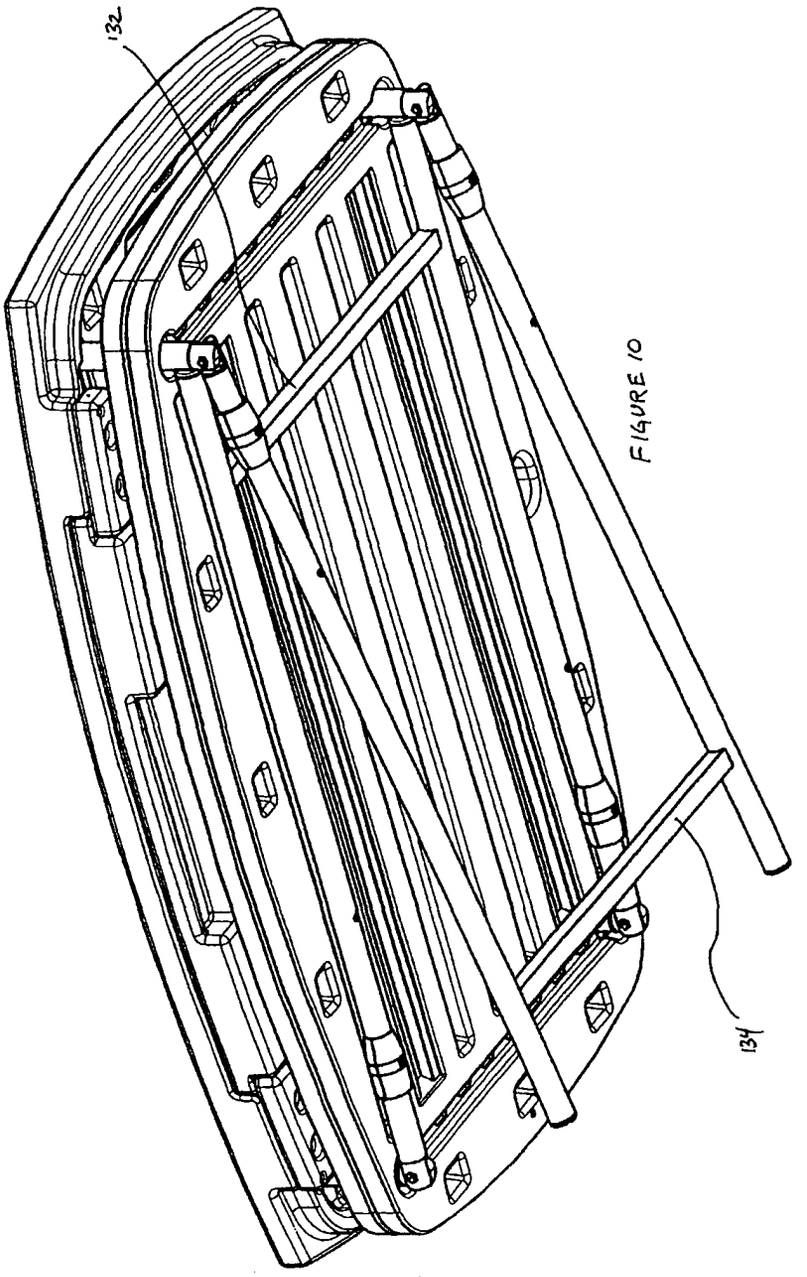
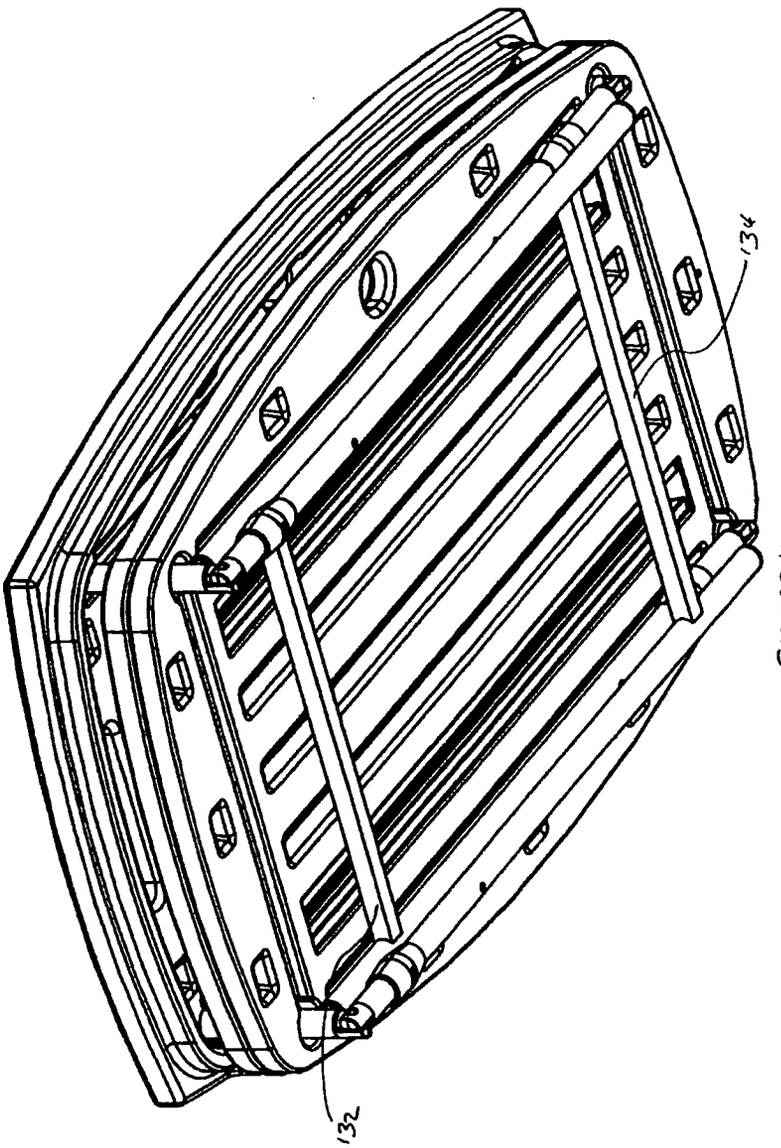


FIGURE 10



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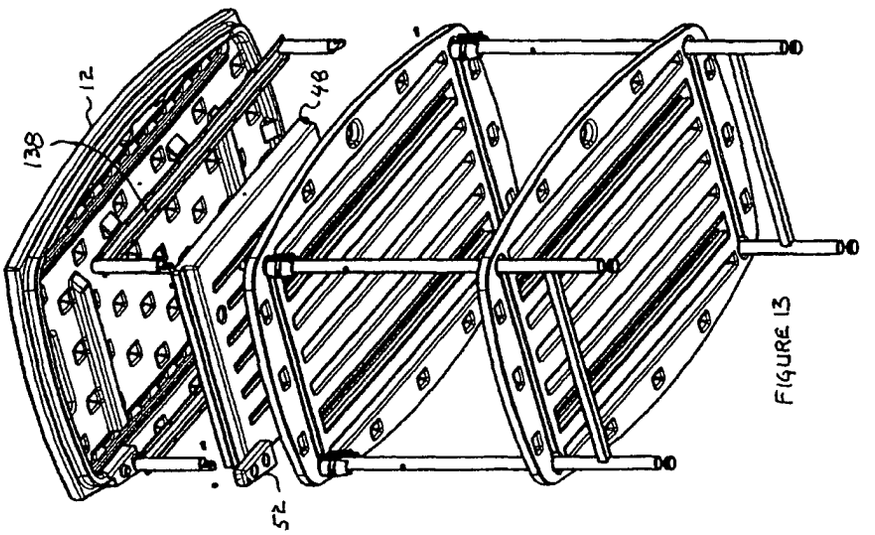


FIGURE 13

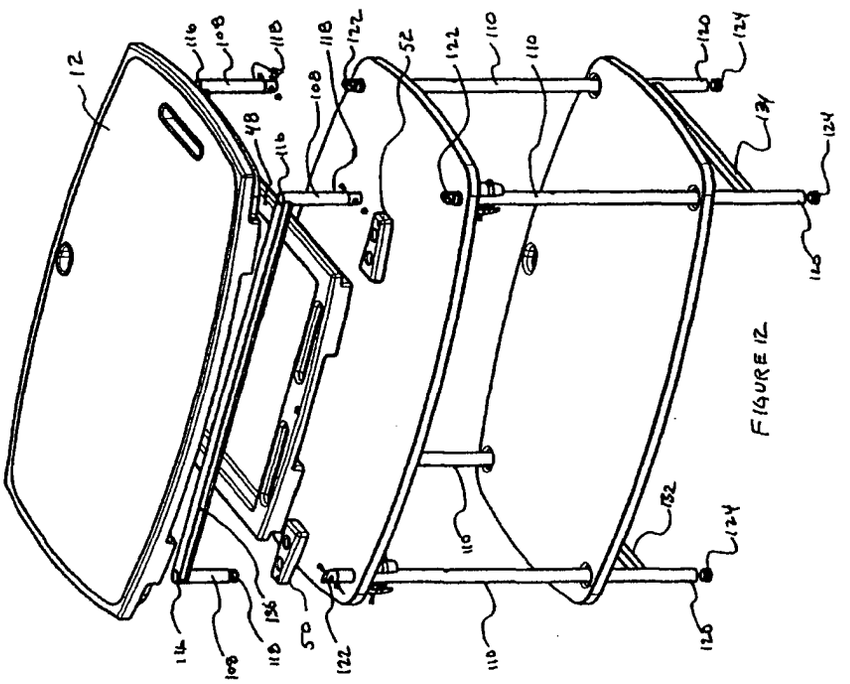


FIGURE 12

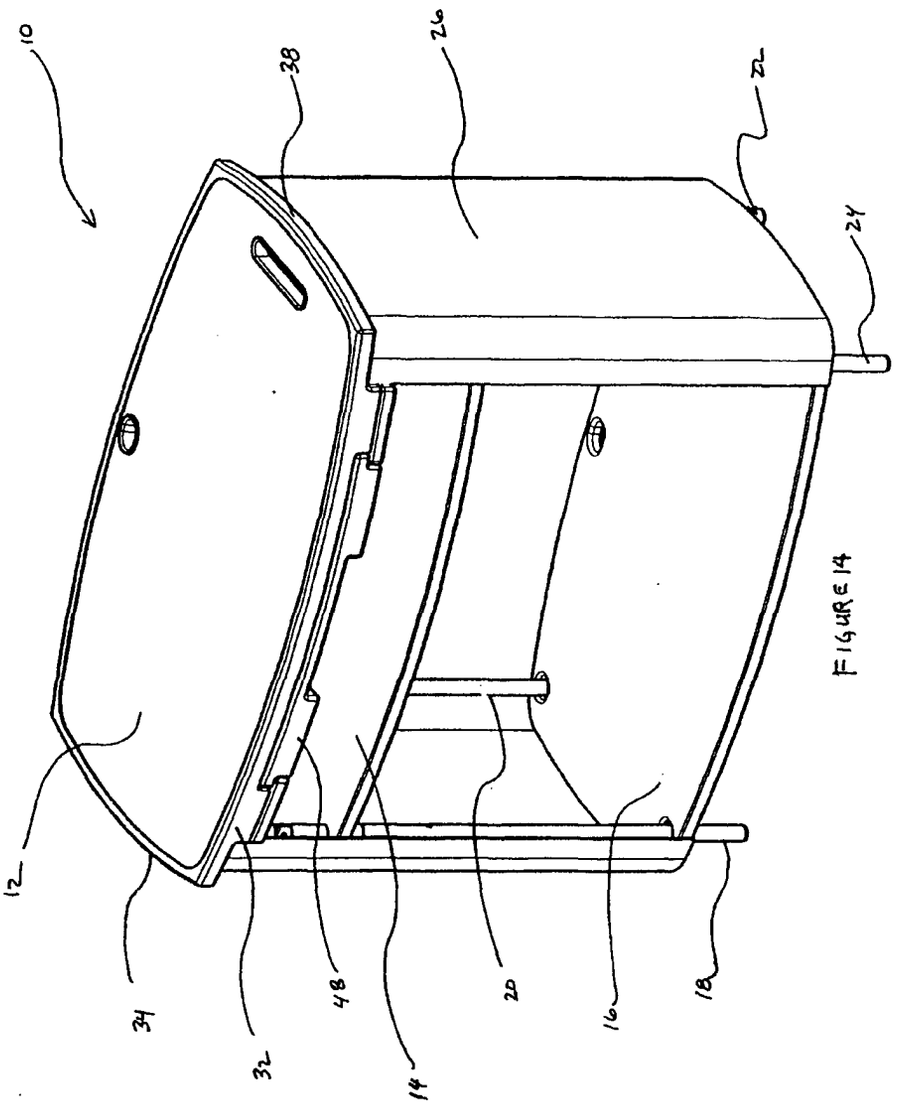
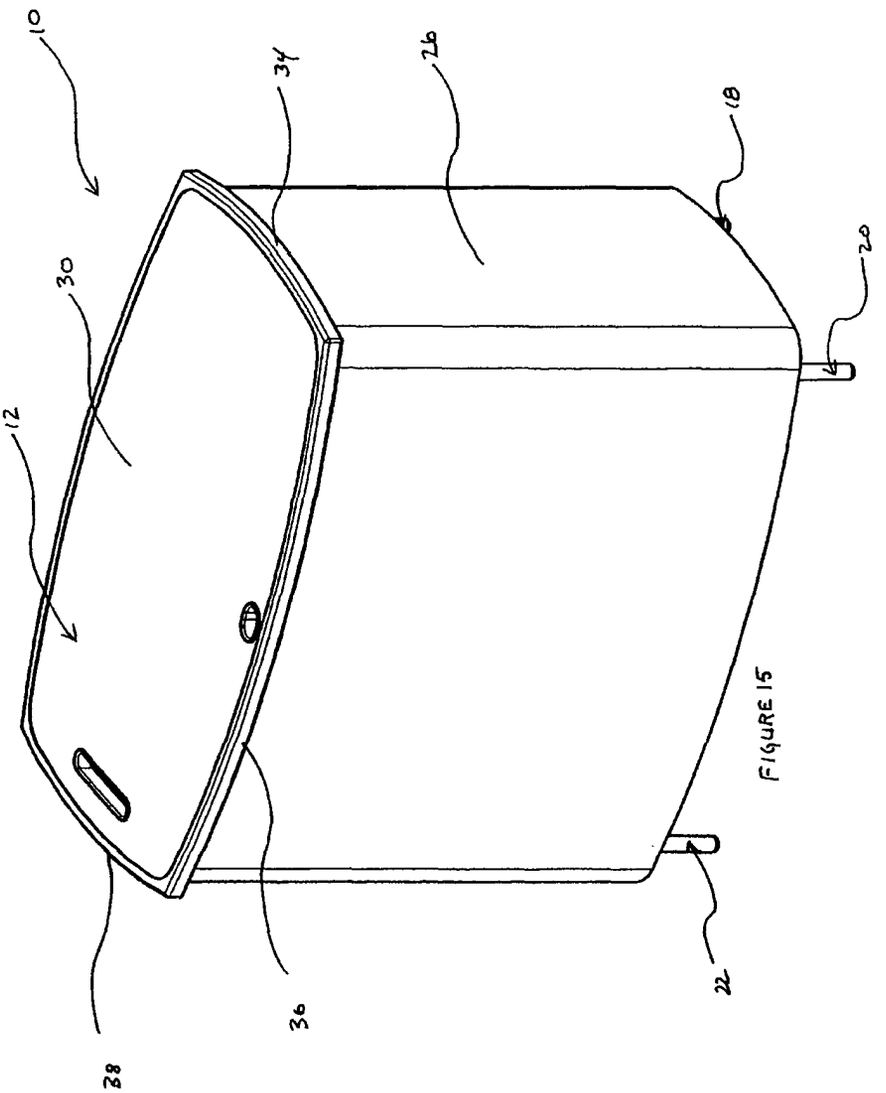


FIGURE 14



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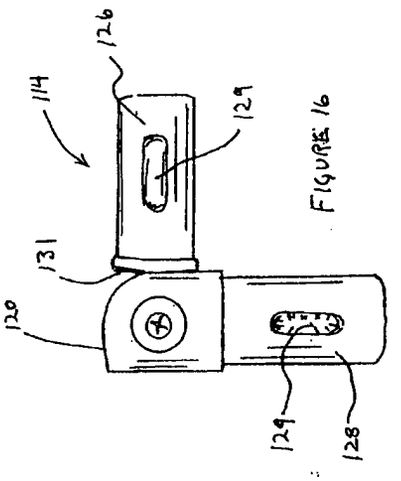

FIGURE 16

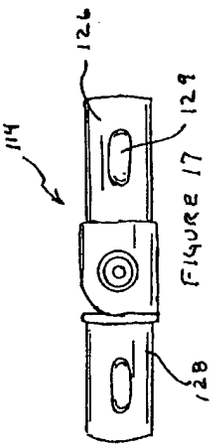

FIGURE 17

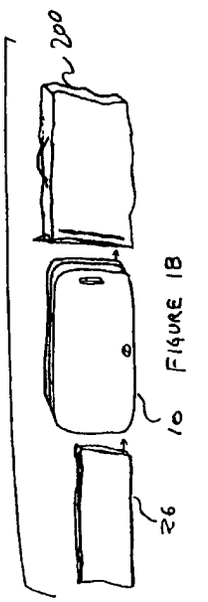

FIGURE 18