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**Buono**

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(54) **COLLAPSIBLE TABLE**

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IGLOO It's for Keeps, The Most Lightweight, Durable, Versatile Table You'll Every Carry. (US).

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(57) **ABSTRACT**

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A collapsible table has a table top, such as may be formed by blow molding, with a substantially planar top surface and a bottom surface opposite the top surface. Formed into the bottom surface of the table top are opposing first and second channels. Disposed within the first channel is a first pivot bar, and disposed within the second channel is a second pivot bar. The table includes opposing first and second frame members secured to the bottom surface of the table top. Disposed between and pivotally attached to the first and second frame members are opposing first and second leg assemblies which are movable between a use position and a storage position. To maintain the first leg assembly in the use position, the table has a first support assembly including a first brace structure and a first support bar. The first brace structure has a first central pivotal attachment point, and one or more first distal pivotal attachment points attached to the first leg assembly. The first support bar has a first end which is pivotally attached to the first pivot bar and a second end which is pivotally attached to the first central pivotal attachment point of the first brace structure. To maintain the second leg assembly in the use position, the table has a second support assembly having a second brace structure and a second support bar. The second brace structure has a second central pivotal attachment point, and one or more second distal pivotal attachment points attached to the second leg assembly. The second support bar has a first end which is pivotally attached to the second pivot bar and a second end which is pivotally attached to the second central pivotal attachment point of the second brace structure.

(51) **Int. Cl.<sup>7</sup>** ..... **A47B 3/00**

(52) **U.S. Cl.** ..... **108/132**

(58) **Field of Search** ..... 108/132, 131, 108/130, 129, 133; 248/188.6

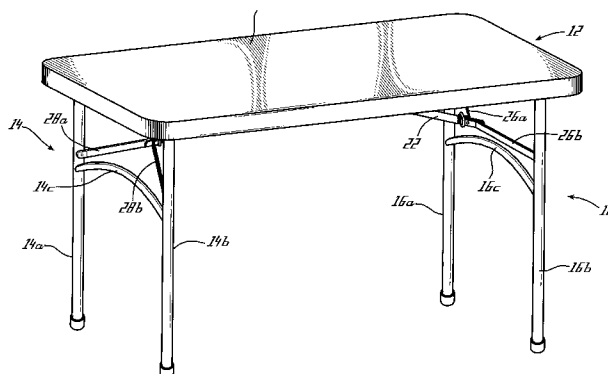
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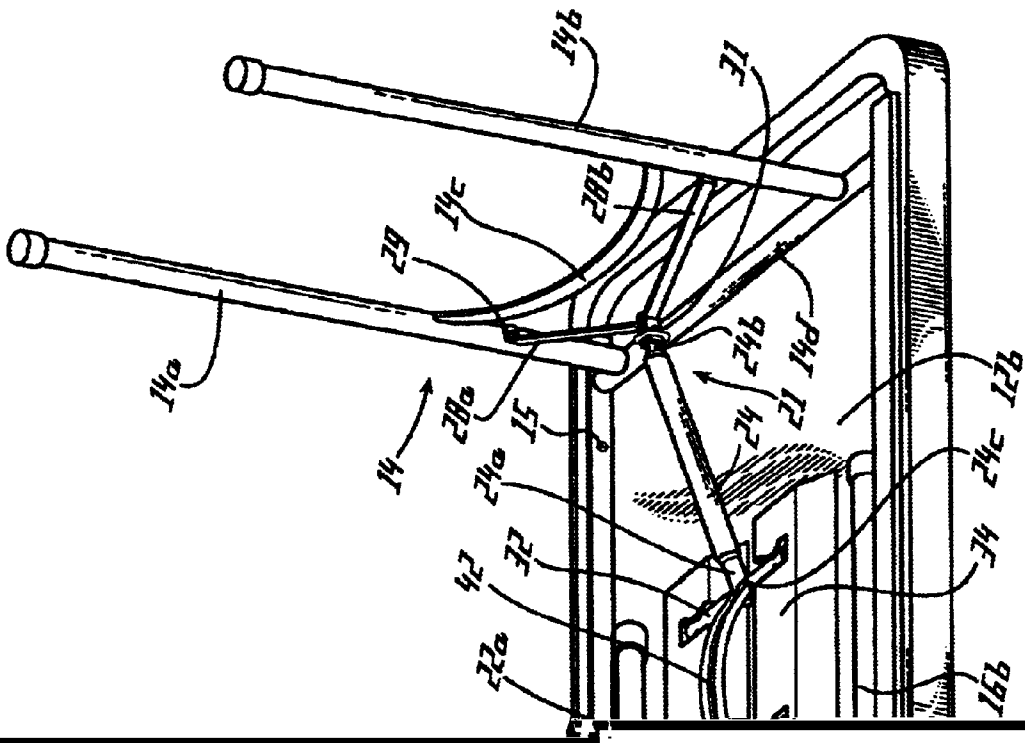
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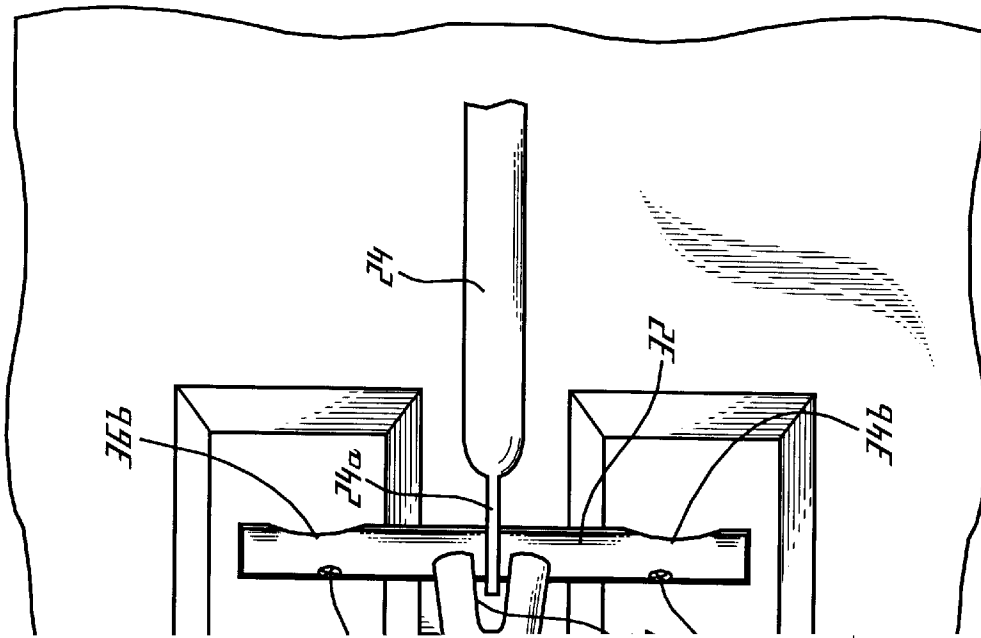
**25 Claims, 9 Drawing Sheets**











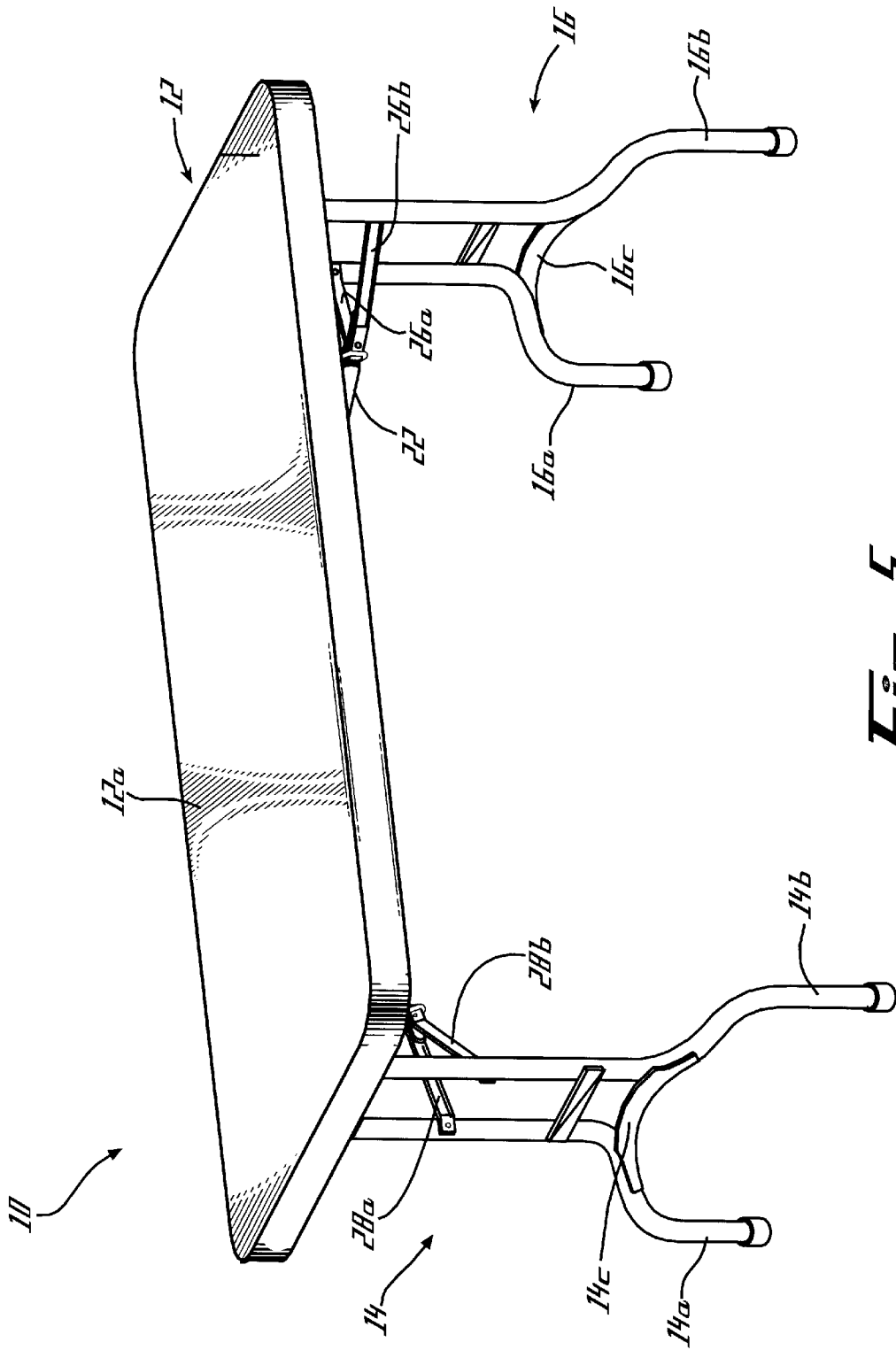
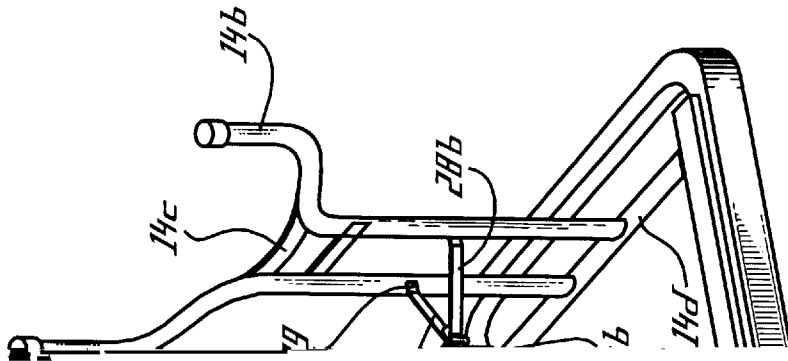


Fig. 5





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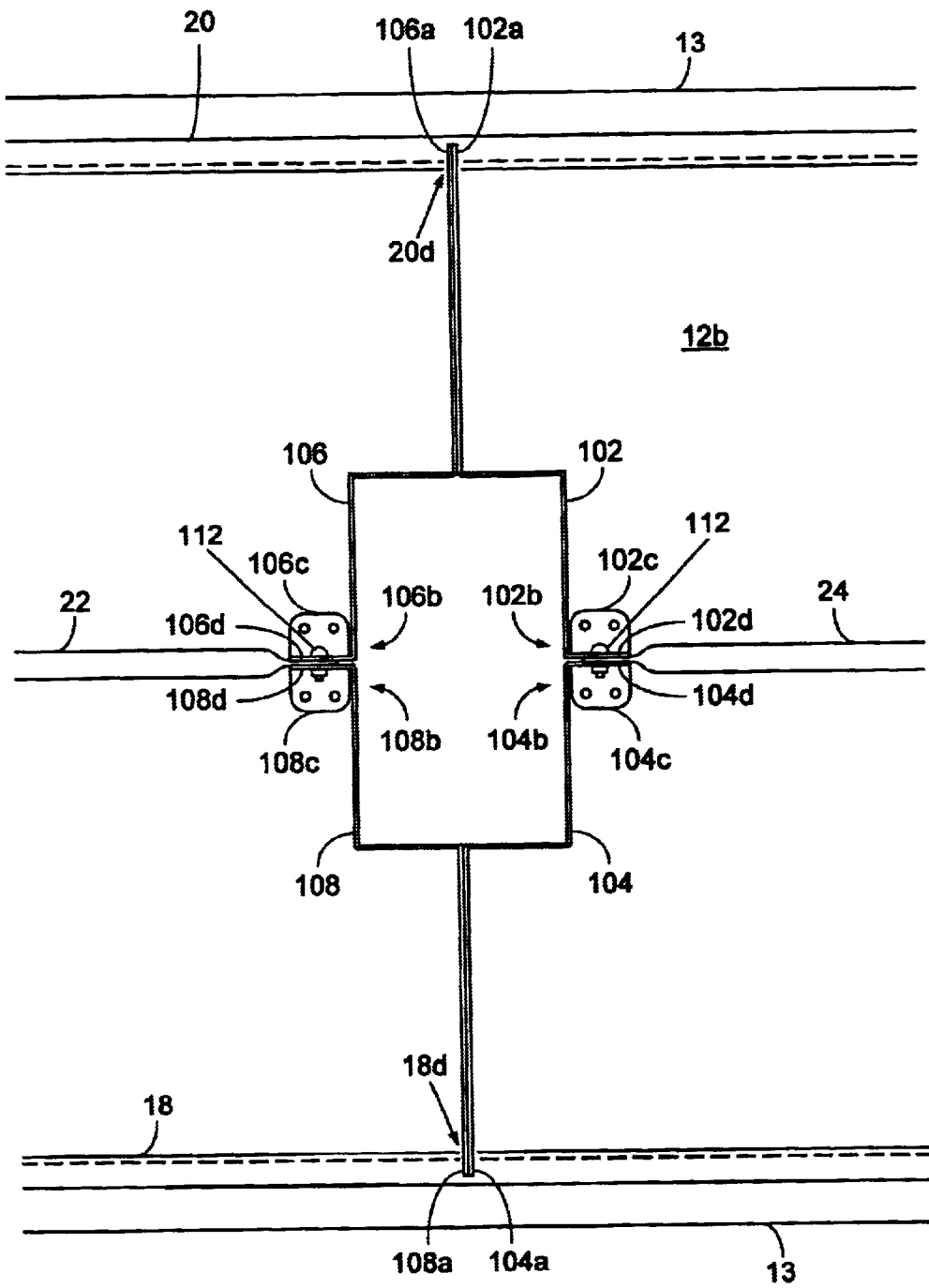
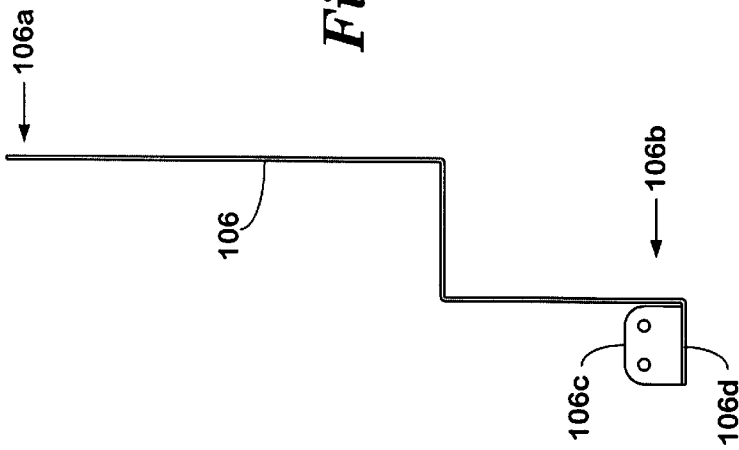
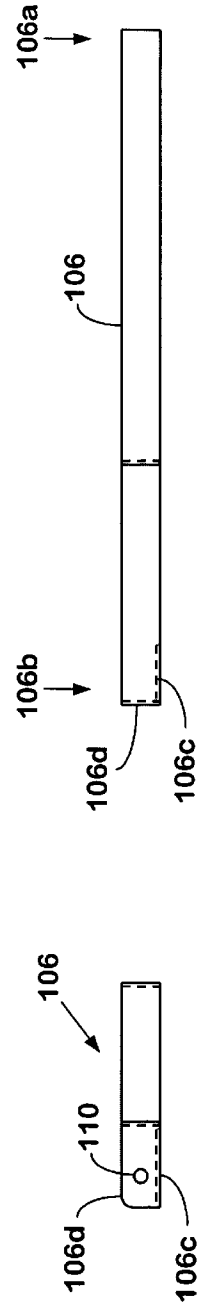


Fig. 8



*Fig. 9A*



*Fig. 9B*

*Fig. 9C*

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COLLAPSIBLE TABLE

FIELD

This invention relates to collapsible furniture. More particularly, the invention relates to a lightweight table having legs which may collapse from a use position to a storage position.

BACKGROUND

Collapsible or foldable tables are widely used to provide temporary table space in multipurpose meeting rooms, such as banquet halls and hotel conference rooms. Collapsible tables are popular for such applications because they may be folded into a relatively flat package which provides for ease

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diameter substantially equivalent to the outside diameter of the first and second pivot bars.

Also in preferred embodiments, the bottom surface of the table top has opposing first and second projections separated by a separation distance. The first channel preferably has a first channel portion formed in the first projection, and a second channel portion formed in the second projection opposite the first channel portion. The first pivot bar is disposed within the first and second channel portions of the first channel, and spans the separation distance between the first and second projections. The second channel preferably

has a third channel portion formed in the first projection, and a fourth channel portion formed in the second projection opposite the third channel portion. The second pivot bar is disposed within the third and fourth channel portions of the second channel, and spans the separation distance between the first and second projections.

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FIG. 4 depicts a structure for pivotally attaching support bars to a bottom surface of a table top of a collapsible table according to a preferred embodiment of the invention;

FIG. 5 is a perspective view of the top of a collapsible table according to an alternative embodiment of the invention;

FIG. 6 is an exploded view of a collapsible table according to an alternative embodiment of the invention;

FIG. 7 is a perspective view of the bottom of a collapsible

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and adjacent each end of the second frame member **20** are substantially circular apertures **20b** and **20c**. The purpose of the apertures **18b-18c** and **20b-20c** is described below.

As depicted in FIGS. 1-3, the table **10** includes a pair of opposing leg assemblies **14** and **16**, also referred to herein as a first leg assembly **14** and a second leg assembly **16**. The first and second leg assemblies **14** and **16** are pivotally attached to and between the first and second frame members **18** and **20**. In the preferred embodiment, the first leg

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the bottom surface 12b of the table top 12 are a pair of opposing elongate projections 34 and 36, also referred to

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assemblies 14 and 16, allows these structures to fold down substantially parallel to the table top 12. The gap 35 between

herein as first and second projections 34 and 36, which are separated by a gap 35. In the preferred embodiment, the projections 34 and 36 are formed during the molding of the table top 12, and are thus integral and continuous extensions of the material which forms the bottom surface 12b of the table top 12. Within the first and second projections 34 and 36 are formed second projections 38 and 40. The first and

the first and second projections 34 and 36 provides a space to accommodate the support bars 22 and 24 when the leg assemblies 14 and 16 are folded down into the storage position.

With reference to FIG. 3, the preferred embodiment of the invention includes lock rings 31, each having sufficient inner

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brackets **102** and **104** are attached to the bottom surface **12b**, a hole in the pivot tab **102d** is aligned with an opposing hole in the pivot tab **104d** of the bracket **104**. The first end **22a** of the support bar **22** is disposed between the pivot tabs **106d**

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attachment point, the at least one first distal pivotal attachment point pivotally attached to the first leg assembly; and  
a first support bar having first and second ends, the second end of the first support bar pivotally attached

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the second pivot bar penetrating the second aperture in the second support bar.

7. The collapsible table of claim 1 further comprising: the first pivot bar disposed substantially in parallel with the second pivot bar, and separated from the second pivot bar by a separation distance; and

a handle member having a first handle end secured to the first pivot bar and a second handle end secured to the second pivot bar, the handle member disposed substantially perpendicular to the first and second pivot bars and spanning the separation distance between the first and second pivot bars.

8. The collapsible table of claim 7 further comprising: the first handle end of the handle member having a first notch straddling the first end of the first support bar; and

the second handle end of the handle member having a second notch straddling the first end of the second support bar.

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a first support bar having first and second ends, the second end of the first support bar pivotally attached to the first central pivotal attachment point of the first brace structure, and the first end of the first support bar pivotally attached to the first pivot bar; and

a second support assembly for maintaining the second leg assembly in the use position, the second support assembly comprising:

a second brace structure having a second central pivotal attachment point and at least one second distal pivotal attachment point, the at least one second distal pivotal attachment point pivotally attached to the second leg assembly; and

a second support bar having first and second ends, the second end of the second support bar pivotally attached to the second central pivotal attachment point of the second brace structure, and the first end of the second support bar pivotally attached to the second pivot bar.

11. The collapsible table of claim 10 further comprising:

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attached to the first central pivotal attachment point of the first brace structure, and  
 a second support assembly for maintaining the second leg assembly in the use position, where the second support assembly includes  
 a second brace structure having a second central pivotal attachment point and a second distal pivotal attachment point, where the second distal pivotal attachment point is pivotally attached to the second leg assembly, and

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tially perpendicular to the first and second pivot bars and spanning the separation distance between the first and second pivot bars.  
 20. The improvement of claim 19 further comprising:  
 the first handle end of the handle member having a first notch straddling the first end of the first support bar; and  
 the second handle end of the handle member having a second notch straddling the first end of the second support bar.  
 21. A collapsible table comprising:

the second end of the second support bar is pivotally attached to the second central pivotal attachment point of the second brace structure,  
 an improvement comprising:  
 opposing first and second channels molded into the bottom surface of the table top;  
 a first pivot bar disposed within the first channel;  
 the second end of the first support bar pivotally

a table top having:  
 a substantially planar top surface;  
 a bottom surface opposite the top surface;  
 opposing first and second frame members secured to the bottom surface of the table top, the first frame member having a first central slot, and the second frame member having a second central slot;  
 a first attachment bracket having a first distal end and



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attached to the second central pivotal attachment point of the second brace structure, and the first end of the second support bar disposed between and pivotally coupled to the third proximal end of the third attachment bracket and the fourth proximal end of the fourth attachment bracket. 5

22. A method for manufacturing a collapsible table comprising the steps of:

(a) forming a table top having a substantially planar top

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(m) providing a second support bar having first and second ends;

(n) pivotally attaching the second end of the second support bar to the second central pivotal attachment point of the second brace structure;

(o) providing a second pivot bar;

(p) pivotally attaching the first end of the second support