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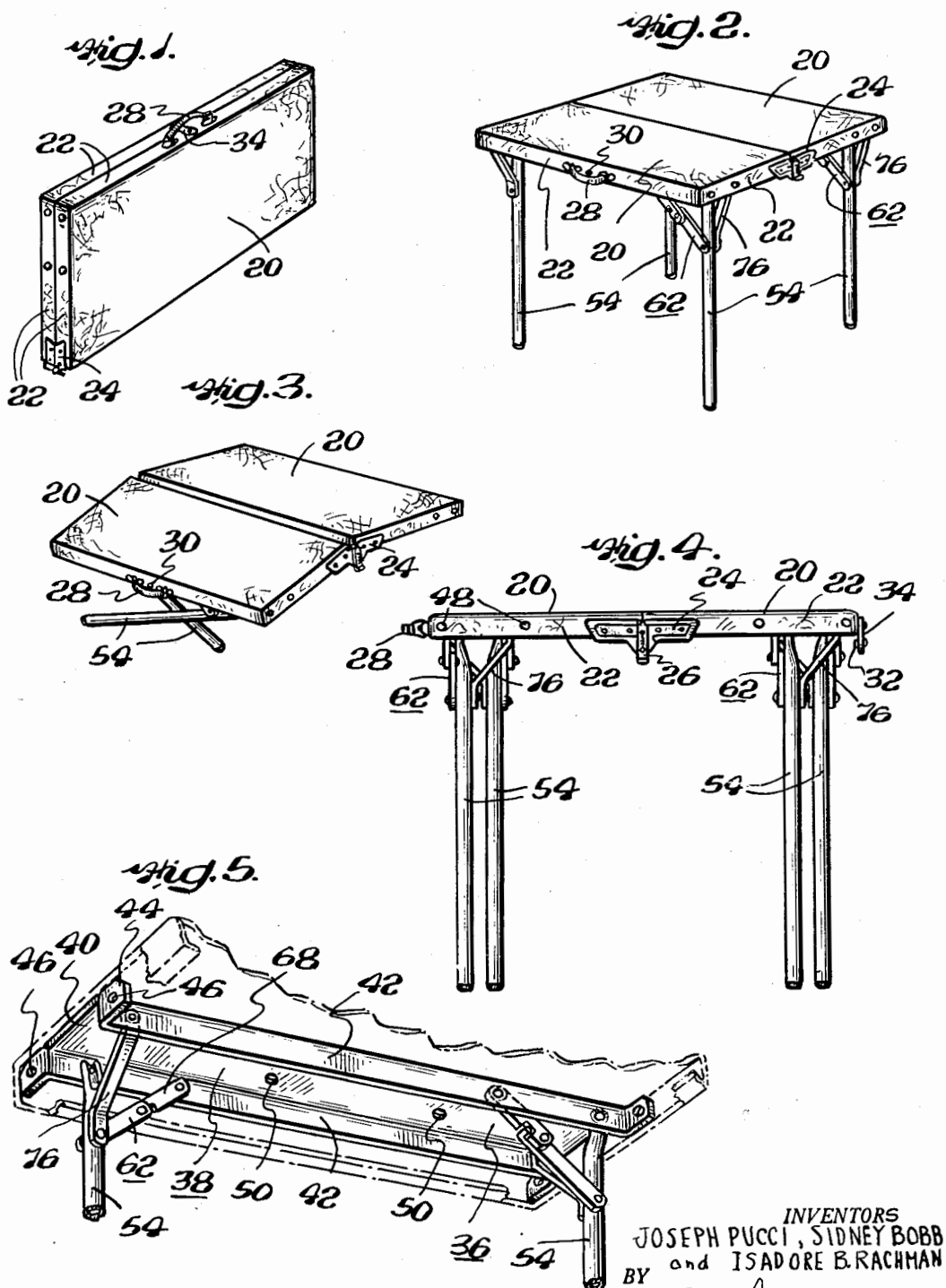
J. PUCCI ET AL

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FOLDING SECTIONAL TOP TABLE

Filed Nov 2, 1955

2 Sheets-Sheet 1



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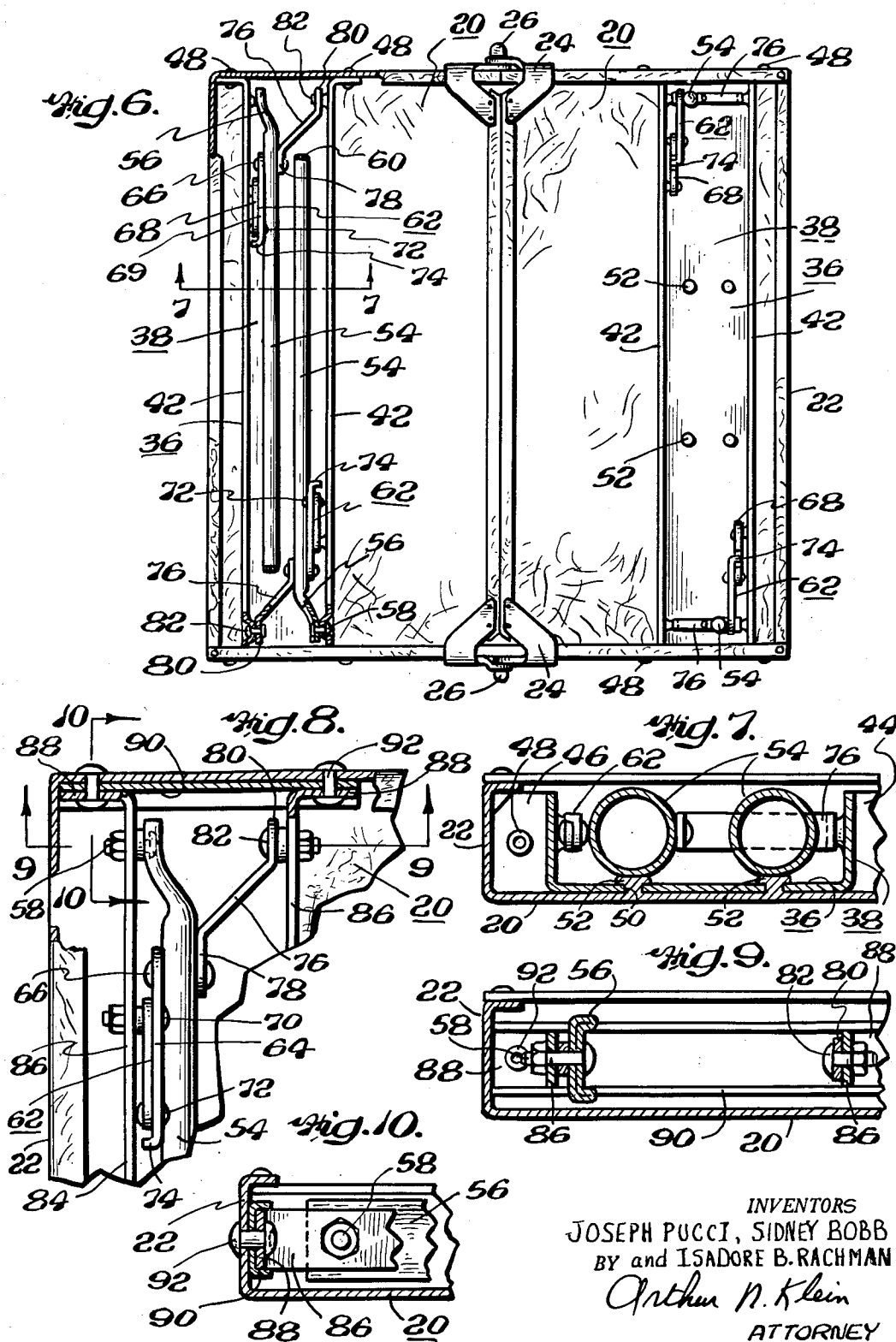
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FOLDING SECTIONAL TOP TABLE

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The present invention relates generally to folding or collapsible tables and the like and more particularly to tables having sectional folding tops and collapsible legs.

An object of the present invention is to provide a new and improved construction for a table or the like having a folding sectional top and collapsible legs. Another object of this invention is to provide a novel table construction for a bridge table or other table of comparable top-size in which the top collapses along a transverse center fold line to provide a compact suitcase-like construction having half the open length, and in which novel means are provided for mounting a pair of legs underneath each table top section so that the legs are braced in two right-angular planes when open while being foldable to collapsed position against the underside of the table top section; the legs of each pair extending, when collapsed, in side-by-side parallel relationship transversely of the table top section.

Other objects and advantages of the present invention are apparent in the following detailed description, appended claims and accompanying drawings.

For the purpose of illustrating the invention, there are shown in the accompanying drawings forms thereof which are presently preferred and which have been found in practice to give satisfactory results; it being understood, however, that this invention is not limited to the precise arrangements and instrumentalities disclosed.

Referring to the accompanying drawings in which like reference characters indicate like parts throughout:

Figure 1 is a perspective view of a table forming one embodiment of the present invention, shown in closed position.

Figure 2 is a perspective view of the embodiment of Fig. 1 shown in open position.

Figure 3 is a perspective view of the table of Figs. 1-2 shown in partially closed position.

Figure 4 is a front elevational view of the table of Figs. 1-3.

Figure 5 is a fragmentary perspective view of one of the collapsible paired-leg assemblies shown as it would appear in position affixed to the underside of a top section; the top section being shown in interrupted lines.

Figure 6 is a bottom plan view of the table of Figs. 1-4; the legs of one paired-leg assembly being shown in open position while those of the other paired-leg assembly are shown in closed collapsed position.

Figure 7 is an enlarged cross-sectional view taken generally along the line 7-7 of Fig. 6.

Fig. 8 is a fragmentary bottom plan view showing the underside of a table forming another embodiment of this invention.

Figure 9 is a cross-sectional view taken generally along the line 9-9 of Fig. 8.

Figure 10 is a cross-sectional view taken generally along the line 10-10 of Fig. 8.

In Figs. 1-8, there is shown a sectional top folding bridge table forming one embodiment of the present in-

vention and including a pair of identical top sections 20, each provided with a continuous peripheral depending flange 22. The top sections 20 are connected by a pair of identical hinges 24 so that the top sections can be positioned either in open edge-to-edge coplanar relationship as shown in Figs. 2 and 4 or in closed parallel side-by-side relationship as shown in Fig. 1. The hinges 24 do not form part of the present invention and are the subject of co-pending application Serial No. 536,093, wherein they are more fully shown and described. The hinges 24 include locking slide members 26 which automatically lock the hinge elements in open position, shown in Figs. 2 and 4 (so as to maintain the top sections 20 in abutting edge-to-edge co-planar relationship) but which can be manually moved (upward in Figs. 2 and 4) to release the hinge elements and permit the top sections to be swung about a center transverse hinge line to the partly closed position of Fig. 3, and finally to the fully closed position of Fig. 1.

The outer transverse flange portion of one of the top sections is provided with a carrying handle 28 for use when the table is closed as in Fig. 1. The same outer transverse flange portion is provided with a male snap fastener element 30, while a female element 32 is mounted on a strap 34 fastened to the outer transverse flange portion of the other top section as shown in Figs. 2 and 4. When the two top sections are closed, the fastener elements 30 and 32 can be interconnected, as in Fig. 1, to lock the table in closed position for ease in carrying and storing.

A pair of identical leg units 36, one of which is shown in solid lines in Fig. 5, are constructed and arranged to be mounted on the undersides of the two top sections 20. Each leg unit 36 includes a frame or body 38 which, in the embodiment of Figs. 1-7, may be integrally formed of relatively thin metal or the like. The frame 38 may be of generally U-shaped configuration with an uppermost generally horizontal portion 40 and depending vertical parallel spaced edge flanges 42. The ends of the flanges 42 extend somewhat beyond the free end edges of the portion 40 and are bent, generally at right angles to the main portion of the flanges; the flange ends 44 of the respective flanges being disposed in parallel diverging relationship to each other, as best shown in Figs. 5 and 6. The frame 38 is of a length corresponding generally to the transverse dimension of the top section, so that it can be positioned against the underside of the top section in transverse relationship thereto and with the flange ends 44 contacting the inner surfaces of the peripheral flange 22.

The flange ends 44 are provided with holes 46, shown in Fig. 5, whereby they can be secured to the peripheral flange 22 by rivets 48 (which also pass through aligned holes in the flange 22) as best shown in Fig. 6. The horizontal frame portion 40 is provided with a plurality (for example 4) of holes 50, shown in Fig. 5, adapted to receive rivet portions 52 formed on the underside of the top section, as best shown in Fig. 7, so as firmly to mount the leg unit on the underside of the top section, as illustrated in Fig. 6.

The leg unit 36 also includes a pair of identical legs 54 fastened to the flanges, in a manner to be described, so that they can be swung either to open position (shown in Figs. 2, 4 and 5 and also at the right-hand side of Fig. 6) wherein they extend vertically downward from the top of the table; or to closed position (shown at the left-hand side of Fig. 6) wherein they are disposed in parallel side-by-side relationship against the underside of the top section and within the confines of the peripheral flanges 22 as indicated in Fig. 7.

Thus, each leg 54 has an offset end 56 which is tiltably

connected to the inner side of one of the flanges 42 by a pivot pin 58 so that the main portion of the leg is parallel to, but spaced somewhat away from the flange when the leg is in closed position, as best shown in Fig. 6. One of the legs 54 is secured to the outer of the two flanges 42 and the other leg is secured to the inner or centermost of the flanges. The pivot pins 58 for the two legs 54 are disposed at opposite ends of the respective flanges 42, which are somewhat longer than the legs, so that the free end of foot 60 of each leg terminates short of the pivot pin 58 of the other leg. The transverse clearance between the two flanges 42 is sufficiently large to permit the two legs to be spaced apart somewhat, in parallel relationship, when closed.

Each leg is provided with a two link collapsible brace 62 disposed intermediate the main portion of the leg and its supporting flange 42. One of the brace links 64 is pivotally connected to the flange 42 by a pin 66 while the other brace link 68 is pivotally connected to the main portion of the leg 54 by a pin 70 at a point spaced slightly from the offset end 56. The two links 64 and 68 are connected by a pivot pin 72 and a stop shoulder 74 is formed on the free end of the link 68 to lock the brace in generally 45 degree relationship to the leg, when the leg is in open position, as best shown in Figs. 2 and 5. As illustrated in Figs. 5 and 6, the open brace 62 lies generally in a plane transverse to the table top section, namely parallel to the center fold line of the table top, so as to brace or support the leg against movement parallel to the center fold line.

Each leg 54 is also provided with a rigid one-piece brace 76. One end 78 of the brace 76 is pivotally connected to the leg 54 by the same pin 70 which connects the folding brace link 68. The main portion of the brace 76 extends at an obtuse angle to the end 78 and diagonally across to the opposite flange 42; the opposite end 80 of the brace 76 being pivotally connected to said opposite flange by a pin 82, which is disposed in axial alignment with the leg pivot pin 58, as shown in Fig. 6.

It can be seen that the main diagonal portion of each brace 76 passes beyond (that is, outside of) the free end or foot 60 of the other leg, so that either leg can be opened or closed without interference from the other and without the need for opening and closing the legs in predetermined order, as is necessary in certain prior art structures.

As seen from the right hand side of Fig. 6, the one-piece brace 76, when in open position, is disposed in a plane generally at right angles to the center transverse fold line of the table top, so as to brace or support the leg against movement transverse to the center fold line.

It can be seen, therefore, that each leg 54, when opened, is cross-braced in two substantially perpendicular planes, so as to provide a firm and rigid support for the table.

In order to close the table, the two-piece brace 62 is pushed to collapse it in a manner well known to the art, after which the two legs 54 are folded up and in, as shown in Fig. 3, until they reach the fully closed and enclosed position shown at the right hand side of Fig. 6 and also shown in Fig. 7. After both pairs of legs 54 have thus been closed, the slide members 26 are operated to unlock the hinges 24, and the top sections 20 are folded together, as in Fig. 3, until they reach the fully closed half-size position of Fig. 1, whereupon the fastener elements 30 and 32 can be engaged to provide a compact valise-like structure which is easy to carry and store.

As can be seen from Fig. 1, the two leg units 36 are fully enclosed within, and concealed by, the top sections and their abutting peripheral flanges 22 when the table is closed.

The novel construction of the present invention permits the leg units to be pre-assembled as more or less integral identical assemblies which can then be attached, interchangeably, to the top sections by means of rivets 48 and rivet portions 52.

When the table is open, the two legs 54 of each leg

unit 36, though spaced slightly apart laterally, as indicated in Fig. 4, provide rigid cross-braced support for the four corners of the table.

While particularly suitable for a bridge table, the novel construction of the present invention is well suited for use in other types of folding tables such as picnic tables, temporary dining tables, etc. In the case of a bridge table having a top which is about 30 inches square and having a height, when open, of about 27 inches, the novel construction of the present invention permits the table to be folded up to an enclosed structure having a length of about 30 inches, a width of about 15 inches and a thickness of less than 3 inches. Not only does this make for compactness and ease in storing and carrying, but, in addition, it brings the over-all dimensions of the closed table down to a figure which enables it to be shipped parcel post, thereby effecting a considerable saving, as compared to the cost of delivering by motor or rail freight.

In Figs. 8-10, there is shown another embodiment of the present invention which generally resembles that of Figs. 1-7 described above, except for the construction of the leg unit frame.

In this embodiment, the leg unit frame or body 84, instead of being formed from an integral piece of sheet metal as in Figs. 1-7, includes a pair of members 86 (corresponding to the flanges 42) having end portions 88 bent at right angles, the two end portions at either end of the frame diverging with respect to each other as shown in Fig. 8.

The frame 84 also includes a pair of end members or straps 90 which are connected to the bent end portions 88 by rivets 92. The end members 90 serve as spacers to maintain the end portions rigidly in predetermined spaced relationship, with the main portions of the frame members 86 parallel. The ends of the frame 84 can be secured to the peripheral flange 22 of the top section by riveting or in any suitable manner. Optionally, though not necessarily, the rivets 92 which connect the end members 90 to the bent end portions 88 can also be used to connect the frame 84 to the flange 22, in the manner shown in Fig. 8, and also shown in Fig. 10.

The legs 54 are mounted upon the frame members 86 in the same manner as they are mounted upon the flanges 42 of the embodiment of Figs. 1-7. That is, the offset end 56 of each leg is connected to the adjoining frame member 86 by a pivot pin 58; the leg is connected to the same frame member 86 by a two link collapsible brace 62; and the leg is also connected to the opposite frame member by a rigid diagonal brace 76. As shown in Figs. 8 and 9, the pivot pin 58 for the offset leg end 56 and the pivot pin 82 connecting the end 80 of the brace 76 to the opposite frame member are in axial alignment to permit the leg to swing between open and closed position in a manner analogous to that shown in Fig. 6.

The present invention may be embodied in other specific forms and, therefore, the foregoing embodiments are to be considered in all respects as illustrative and not restrictive; reference being made to the appended claims, rather than to the foregoing specification, as indicating the scope of this invention.

Having thus described my invention, we claim as new and desire to protect by Letters Patent the following:

1. A foldable table comprising a pair of top sections hingedly connected along a central transverse fold line whereby the two top sections can be positioned either in open co-planar edge-to-edge relationship or in closed generally parallel side-by-side relationship, and a pair of collapsible leg units mounted on the undersides of the two top sections, each leg unit comprising a frame extending generally transversely of the top section and disposed relatively closer to the outer transverse free edge thereof, said frame being permanently secured to the underside of the top section, a pair of legs separately pivotally mounted upon the frame, the legs of each pair being laterally spaced apart with their respective pivot

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points disposed adjacent the opposite ends of the frame whereby the two legs can be swung in opposite directions within separate laterally spaced transverse planes either to closed parallel side-by-side position wherein they are disposed generally horizontally adjacent the underside of the top section or to open generally vertical position wherein they are disposed more or less adjacent the opposite outer corners of the top section in load-bearing relationship thereto, and double leg-bracing means connecting each leg to its frame, said double leg-bracing means being foldable with the leg in relation to the frame to and from leg-open and leg-closed positions, the double leg-bracing means for each leg comprising a pair of brace members, one of which is secured to the leg and to the frame at laterally spaced points so as to brace the open leg against movement laterally of the top section, the other of the brace members being secured to the leg and to the frame at transversely spaced points so as to brace the open leg against movement transversely of the top section.

2. A construction according to claim 1 wherein the lateral brace member is a one-piece member which in leg-closed position extends diagonally, both laterally and transversely, intermediate the leg and the frame, the pivotal connection of the member to the frame being coaxial with the pivotal connection of the leg to the frame, and wherein the transverse brace member is collapsible and comprises a pair of hingedly interconnected links which open to leg-bracing position and which close to side-by-side position laterally intermediate the closed leg and the adjoining portion of the frame.

3. A construction according to claim 2 wherein the leg is laterally offset adjacent its pivoted end to provide lateral clearance for the closed transverse brace member.

4. A construction according to claim 2 wherein the free end or foot of each leg terminates short of the diagonally extending lateral brace member of the companion leg in closed position so that the legs can be opened and closed in either order without interference from each other.

5. A construction according to claim 2 wherein each frame includes a pair of laterally spaced transversely extending parallel depending walls, one of the legs being pivotally connected to one wall and the other leg being pivotally connected to the other wall so that, in closed position, the two legs are disposed laterally intermediate the two walls, the transverse brace member for each leg being connected to the same wall as the leg while

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the lateral brace member is connected to the opposite wall.

6. A construction according to claim 5 wherein the free end or foot of each leg terminates short of the diagonally extending lateral brace member of the companion leg in closed position so that the legs can be opened and closed in either order without interference from each other.

7. A construction according to claim 1 wherein each top section is provided with a depending peripheral flange and wherein each frame is provided with end flanges which are connected to the adjoining portions of the top section flanges, the peripheral top section flanges fully enclosing and concealing the collapsed leg units when the top sections are in closed side-by-side position.

8. A construction according to claim 5 wherein each frame is integrally formed of sheet metal or the like with a main portion disposed in abutting relationship to the underside of the top section and with the parallel walls formed as depending flanges of the main frame portion.

9. A construction according to claim 8 wherein each top section is provided with a depending peripheral flange and wherein the ends of the depending frame flanges are bent outward and fastened in abutting relationship to the adjoining portions of the top section flange.

10. A construction according to claim 5 wherein each frame comprises a pair of laterally-spaced transversely-extending elongated members having outwardly bent end portions and a pair of end members secured to the bent end portions and serving to maintain the elongated frame members in rigid parallel relationship.

11. A construction according to claim 10 wherein each top section is provided with a depending peripheral flange and wherein the bent end portions and the frame end members are fastened to the adjoining portions of the top section flange.

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