Sept. 27, 1955 J. H. PERCY 2,719,067

SECTIONAL TOP FOLDING TABLE

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Fig. 1

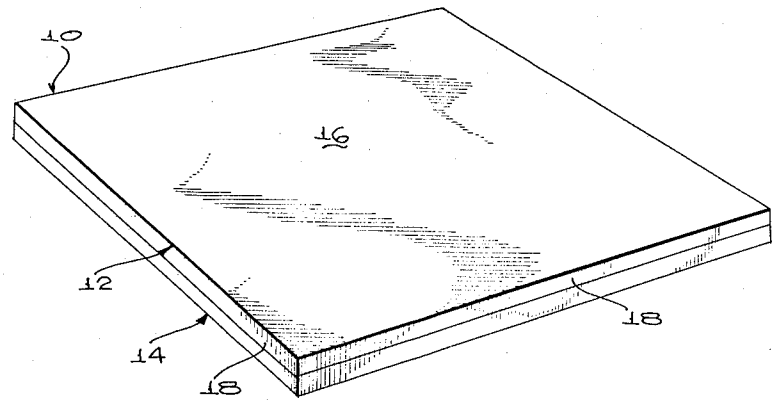
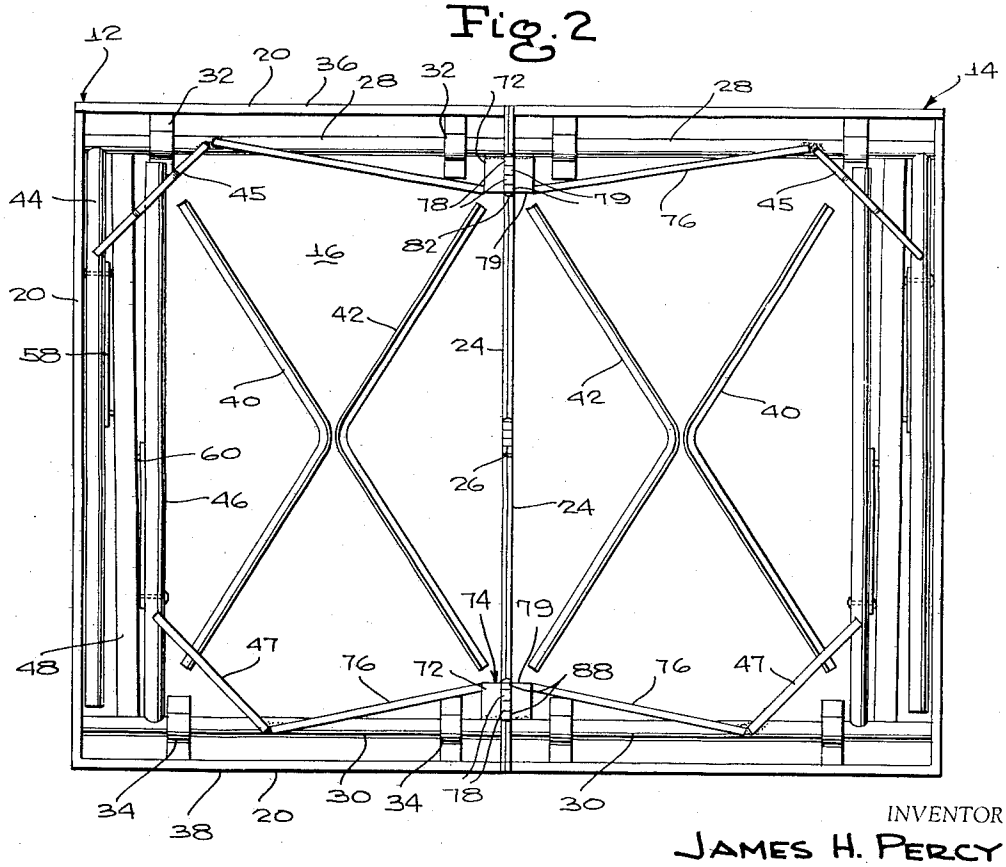


Fig. 2



INVENTOR

JAMES H. PERCY

BY

McMorrow, Berman & Davidson

ATTORNEYS

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Fig. 3

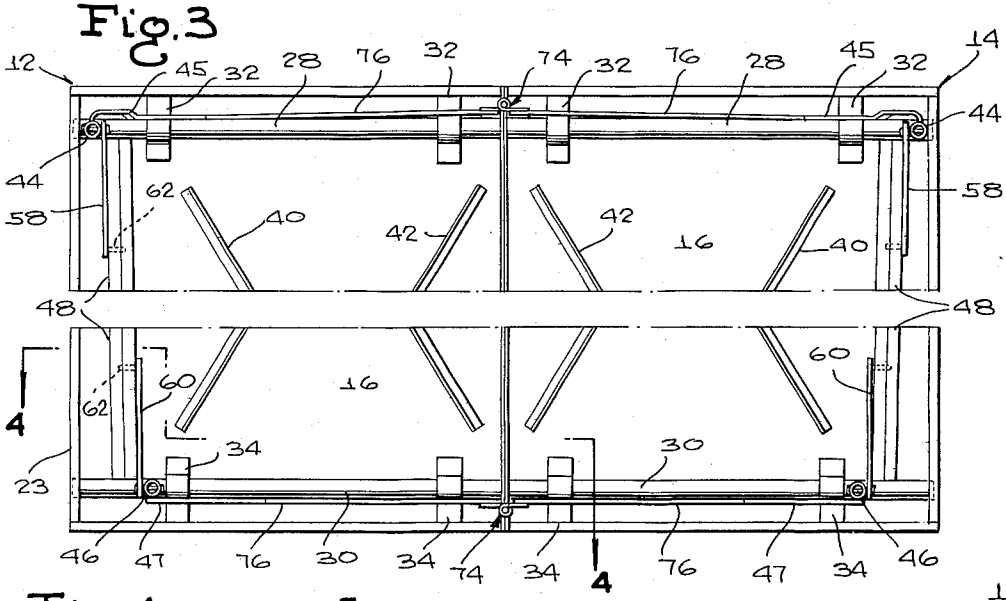


Fig. 4

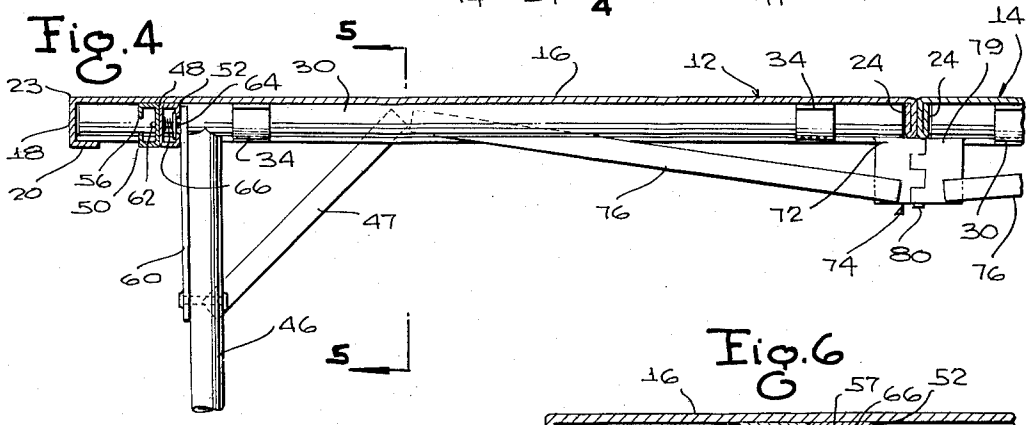


Fig. 5

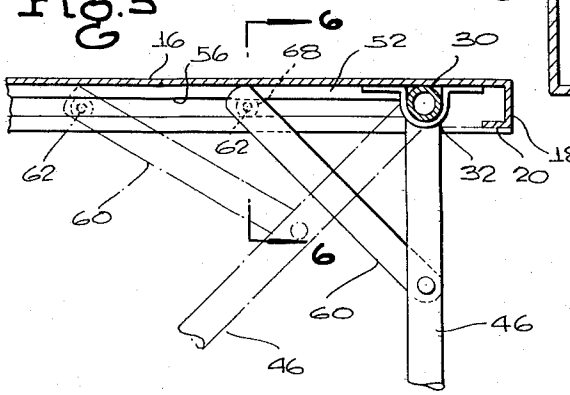
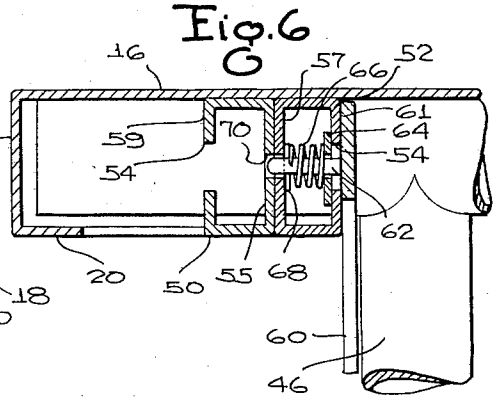


Fig. 6



INVENTOR
JAMES H. PERCY

BY
McMorrow, Berman & Davidson
ATTORNEYS

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SECTIONAL TOP FOLDING TABLE

James Herbert Percy, Hanford, Calif.

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3 Claims. (Cl. 311—90)

This invention relates to supports, and more particularly to tables of the folding type having sectional tops.

It is an object of this invention to provide a folding table which is readily portable in its folded position and which may be used at any location desired, being readily transportable from one location to another.

It is another object of this invention to provide a folding table of great rigidity which will hold weight in excess of three hundred pounds without collapsing.

Yet another object of this invention is to provide a folding table of relatively light weight, so as to be adapted for ready transport, and yet which is simple in construction and rugged in use.

Still another object of this invention is to provide a folding table which may be collapsed into a suitcase type compact package for transport from one location to another.

Other objects and advantages will become apparent from a consideration of the following detailed description, forming the specification, and taken in conjunction with the accompanying drawings, in which:

Figure 1 is a perspective view of the folding table in its collapsed position;

Figure 2 is a bottom plan view of the table, embodying this invention, with the leaves or sections thereof unfolded and the legs collapsed;

Figure 3 is a bottom plan view of the table broken along its longitudinal center line, similar to Figure 2, but showing the legs in their active or extended positions;

Figure 4 is a cross sectional view taken substantially along line 4—4 of Figure 3;

Figure 5 is a cross sectional view taken substantially along line 5—5 of Figure 4, and showing in broken lines a different position of the leg in its movement into and out of active position; and

Figure 6 is a cross sectional view taken along line 6—6 of Figure 5 showing a locking guide pin in locking engagement within the associated guide rail.

With continued reference to the drawings, there is shown a folding table, generally indicated at **10**, which is of the sectional top type having its top made of two sections, generally indicated at **12** and **14**, with each of the sections being identical in construction, so that only the section **12** will be described in detail with corresponding elements in the section **14** being identified by like reference numerals.

The section **12** includes a top supporting surface **16** having a peripheral skirt **18** about three sides thereof with each of the skirt portions having an inturned flange **20** which extends perpendicularly inwardly therefrom along the lower edge thereof to afford reinforcement for the lower edge of the skirt portions **18**. The table top supporting surface **16** and the peripheral skirt thereabouts may be made of any suitable sheet metal material of proper gauge to provide stiffness without undue weight.

The inner transverse end **22** of the top **16** is provided with a perpendicularly depending flange **24** which is doubled back upon itself to impart rigidity thereto. A hinge

26 has one leg thereof secured to the flange **24** of the section **12** and the other leg thereof secured to the similar flange of the section **14**, so that the sections are hingedly secured together along one end for folding movement toward each other and to superimposed relation, as shown in Figure 1, and away from each other, so as to extend in mating relation in the same horizontal plane to provide a continuous top supporting surface for the table **10**.

Hollow tubular bars **28** and **30** are carried by the lower surface of the top **16** adjacent opposite longitudinal edges by respective pairs of strap brackets **32**, **32** and **34**, **34** for rotation about their longitudinal axes. Each of the bars **28** and **30** extends from the inner ends **22** to the outer ends **23** of the section adjacent the longitudinal sides **36** and **38** thereof. The bars **28** and **30** contact the bottom surface of the top **16** and serve as reinforcing members therefor along the opposite longitudinal sides thereof.

A pair of generally V-shaped brace members **40** and **42** are secured to the bottom surface of the top **16** with the apexes thereof in closely adjoining relationship, at approximately the mid-point of the generally rectangular top **16**, with the divergent legs of each of the brace members extending outwardly therefrom toward opposite end corners of the top **16**, but terminating at some distance therefrom. The purpose of the brace members **40** and **42** is to lend stiffness and rigidity to the top supporting surface **16**.

A table leg **44** is fixedly secured at one end to the bar **28** adjacent the end of the bar remote from the inner end **22** of the section **12**. The table leg **44** may be of hollow tubular construction and will be adapted to move in an arcuate path from a stored position, as shown in Figure 2, in which it extends parallel to and transversely of the top supporting surface **16** adjacent the end **23** thereof and in underlying relation thereto to an active position wherein it extends perpendicularly to the top **16** as the bar **28** is rotated about its longitudinal axis.

A cross brace bar **47** extends angularly between the bar **28** and the leg **44** adjacent the juncture thereof.

A table leg **46**, similar to the table leg **44**, is fixedly secured, as by welding, to the bar **30** adjacent the end thereof remote from the inner end **22** of the section **12** and in spaced parallel relation to the leg **44** when in its folded position, as shown in Figure 2, with the leg **46** being disposed inwardly from the leg **44**. As in the case of the leg **44**, the table leg **46** is adapted to move in a vertical arcuate path from a stored position in which it extends transversely of and parallel to the top **16** to an active position wherein it extends perpendicularly to the top supporting surface **16** as the bar **30** is rotated about its longitudinal axis.

A guide bar **48** is carried by the top supporting surface **16** and extends therebeneath to be disposed in the space between the table legs **44** and **46**, when the legs are in their stored or folded position, as shown in Figure 2. The guide bar **48** extends transversely of the section **12** and terminates at a location just short of the bars **28** and **30**.

The guide bar **48** is made up of a pair of hollow, sheet metal tubes of rectangular cross section and are secured together in face to face relation. The tubes are indicated at **50** and **52** respectively. Each of the tubes is provided with a longitudinal slot **54** and **56** respectively, in its outer longitudinal face, that is, the face of each of the tubes remote from the walls or faces secured together in face to face relation.

Each of the legs **44** and **46** pivotally carries a link **58** and **60** pivotally secured adjacent one end to the respective legs by a rivet or other suitable means, adjacent the juncture of the leg with its corresponding bar. The

links 58 and 60 carry adjacent the ends thereof remote from the ends pivotally secured on the respective table legs, locking guide pins 62 which enter and ride in the respective guide slots 54 and 56 of the guide bar 48. As clearly shown in Figures 4 and 5, a washer 64 is disposed within the tubes 50 and 52 with the guide pin 62 extending through the central aperture in the washer, so that the washer will be disposed against the inner surface of the respective tube and ride along the slots therein. It will be noted that the washer is considerably larger in diameter than the width of the slot.

A coil spring 66 surrounds the guide pin 62 on each of the links 58 and 60 and is disposed within the interior of the respective tubes having one end of the spring seated against the washer 64 and the other end of the spring seated against a pin 68 passing transversely through the guide pin 62 adjacent the free end thereof, so as to maintain a resilient pressure between the pin 68, which defines a stop pin, and the washer 69.

Thus, the spring 66 will urge the guide pin against the rear end walls 55 and 57 of the respective tubes 50 and 52, that is, the wall remote from and parallel to the front walls 59 and 61 thereof in which the longitudinally extending guide slots 54 and 56 are provided. Consequently, the links 58 and 60 will be spring urged toward the rear wall of the respective tubes 50 and 52 of the guide bar 48.

The rear walls of the respective guide bars are provided adjacent opposite ends thereof with a guide pin receiving opening 70 transversely therethrough intermediate its upper and lower edges, so that when the respective table legs are moved in their arcuate path from the stored to the active position, the pin 62 will be urged by the coil spring 66 to snap into the opening 70 to lock the respective table leg in its position wherein it projects perpendicularly from the top supporting surface 16.

To release the legs from the locked position, it is merely necessary to apply hand pressure to the link to pull the guide pin out of the pin receiving opening 70 and move the leg in its arcuate path, so that the free end of the guide pin will ride along the inner surface of the rear walls of the respective tubes 50 and 52, which tubes define guide rails for the respective legs.

The table leg 46 is provided with a cross brace bar 47, similar to the brace bar 45, which extends angularly between the table leg and its bar 30 adjacent the juncture thereof and to the side of the juncture remote from the end 23 of the section 12 of the table.

A hinge plate 72, forming one-half of a hinge, generally indicated at 74, has one end thereof secured to the respective bars 28 and 30 at the ends thereof remote from the ends adjacent which the table legs are secured thereto, with the hinge plates extending outwardly from the respective bars in parallel relation with the table leg carried by the respective bars. A brace arm 76 extends between the other end of each of the hinge plates 72 to a point intermediate the ends of the respective bars 28 and 30, so as to define an angular brace member to provide support and rigidity for the hinge plate 72 which is adapted to move in an arcuate path parallel to the arcuate path in which the respective table legs move upon rotation of the associated bars 28 and 30 about their longitudinal axes.

Each hinge plate 72 has provided along its edge remote from the leg mounted on the respective bar, a plurality of spaced hinge barrels 78.

Similar hinge plates 79 are fixedly secured to the ends of the corresponding bars 28 and 30 of the table section 14, and each of these hinge plates carries thereon outwardly extending, spaced hinge barrels 80, which are adapted to mate with the hinge barrels 78 in the space between the hinge barrels 78, so as to form a continuous opening therethrough to receive a hinge pin 82 therethrough to complete the hinge 74.

Thus, the bars 28, 28 and 30, 30 of the table sections 12 and 14 are secured together for simultaneous rotation about their longitudinal axes, and at the same time are capable of being folded toward each other, so that the table can assume its collapsed position, as shown in Figure 1, with the legs in their stored or folded position disposed to opposite sides of the guide bars 48 in each of the sections.

It should be noted that the diameter of the table legs, as well as the height of the guide bars, is no greater than the distance to which the skirt 18 depends from the top supporting surface 16 in each of the table sections, so that the legs, when in their stored or folded position, will be snugly received under the top supporting surface and permit the sections to be moved into folded position toward each other, so that they are in superimposed relation, as shown in Figure 1.

It is understood, of course, that any sort of carrying handle may be attached to the table 10, so as to facilitate its transportation from one location to another. Also, any ordinary type of catch device may be employed to secure the two table sections 12 and 14 together in their folded position.

As viewed in Figure 2, it will be apparent that with the table legs in their stored or folded position, the brace bars 47 will extend angularly across the table legs 46 adjacent their free ends, so as to lock the table legs 46 in their stored position and prevent accidental displacement thereof with the table legs 44 being disposed in upright position, so as to prevent their accidental movement. Thus, the legs will be secured within the respective table sections against accidental movement.

With regard to the guide bars 48 carried by each of the sections 12 and 14, it will be noted that the tubes 52 and 54 thereof have their rear end walls 55 and 57 joined together, so as to be disposed in end to end relation and extend transversely of the top supporting surface with the opposite ends of each of the tubes being coterminous, and the slots 54 and 56 will be provided in the opposite spaced parallel end walls 59 and 61 respectively. The guide slots 54 and 56 extend longitudinally of the end walls 59 and 61 intermediate their top and bottom edges for the entire length of the end walls.

From the foregoing it will be apparent that there has been provided a folding table which comprises a top having a pair of sections 12 and 14 hingedly connected along one end 22 for folding movement toward each other and in superposed relation with each of the sections comprising bars 28 and 30 carried by the top 16 adjacent the opposite longitudinal edges for rotation about their longitudinal axes and extending from the one end 22 to the other end 23 of the section to also serve as reinforcing members for the top 16. A leg 44 and 46 is carried by each of the bars 28 and 30 respectively, adjacent the other end 23 of the section for movement in an arcuate path from a stored position in which it extends parallel to and transversely of the section 12 to an active position wherein it extends perpendicularly to the section as the respective bars 28 and 30 are rotated about their individual axis. Mating hinge means 74 are carried by the respective bars 28 and 30 on each of these sections 12 and 14, whereby the bars are joined together for simultaneous rotation about their longitudinal axes and permit movement of the legs carried thereby toward each other, one in the folded position as the table sections are moved in their superimposed relation.

Thus, it will be seen that the legs 44 in each of the sections will be moved simultaneously, since the bars 28 in each of these sections and upon which the legs 44 are carried, are joined together, so as to move simultaneously about their longitudinal axes. The same is true of the legs 46 in each of the sections 12 and 14. Also, with the legs in their folded or stored position, the hinge means 74 which connects the respective bars 28 and 30 in each of the sections, will permit the folding of the sections

about the hinge 26 into the folded superposed relation, as shown in Figure 1.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor changes in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. A folding table comprising a top having a pair of sections hingedly connected along one end for folding movement toward each other into superposed relation, each of said sections comprising bars carried by the top adjacent opposite longitudinal edges for rotation about their longitudinal axes and extending from said one end to the other end of said section to serve as reinforcing members for the top, a leg carried by each of said bars adjacent said other end of the section for movement in an arcuate path from a stored position in which it extends parallel to and transversely of the said section to an active position wherein it extends perpendicularly to the section as the bar is rotated about its longitudinal axis, mating hinge means carried by the bars in each of said sections at said one end of the sections whereby said bars are joined together for simultaneous rotation about their longitudinal axes and permit movement of the legs toward each other when in the folded position to facilitate the table sections being moved into their superposed relation.

2. A folding table comprising a top having a pair of sections hingedly connected along one end for folding movement toward each other into superposed relation, each of said sections comprising bars carried by the top adjacent opposite longitudinal edges for rotation about their longitudinal axes and extending from said one end to the other end of said section to serve as reinforcing members for the top, a leg carried by each of said bars adjacent said other end of the section for movement in an arcuate path from a stored position in which it extends parallel to and transversely of the said section to an active position wherein it extends perpendicularly to the section as the bar is rotated about its longitudinal axis, mating hinge means carried by the bars in each of said sections at said one end of the sections whereby said bars are joined together for simultaneous rotation about their longitudinal axes and permit movement of the legs toward each other when in the folded position to facilitate the table sections being moved into their superposed position, a guide bar carried by each of said sections and extending transversely of the section adjacent said other end thereof, a link operatively connected between each of said legs and said guide bar, and lock means carried by said link for releasable engagement in said guide bar to releasably secure the leg in its active position.

3. A folding table comprising a top having a pair of sections hingedly connected along one end for folding movement toward each other into superposed relation, each of said sections comprising bars carried by the top adjacent opposite longitudinal edges for rotation about their longitudinal axes and extending from said one end to the other end of said section to serve as reinforcing members for the top, a leg carried by each of said bars adjacent said other end of the section for movement in an arcuate path from a stored position in which it extends parallel to and transversely of the said section to an active position wherein it extends perpendicularly to the section as the bar is rotated about its longitudinal axis, mating hinge means carried by the bars in each of said sections at said one end of the sections whereby said bars are joined together for simultaneous rotation about their longitudinal axes and permit movement of the legs toward each other when in the folded position to facilitate the table sections being moved into their superposed position, a guide bar carried by each of said sections and extending transversely of the section adjacent said other end thereof, a link operatively connected between each of said legs and said guide bar, and lock means carried by said link for releasable engagement in said guide bar to releasably secure the leg in its active position, the legs of each of said sections being disposed in spaced parallel relation and movable in parallel arcuate paths in opposite directions from the stored to the active position, said guide bar being disposed between said legs, said guide bar comprising a pair of tubes having spaced parallel longitudinal end walls secured together along one of the end walls, each tube having a longitudinal guide slot in the other of said end walls, said links each having a spring urged guide pin extending within respective guide slots, said guide slots having a pin receiving opening through the joined end walls of said tubes for receiving therein said guide pin as the respective legs of said sections are moved in their arcuate path to the active position to define said lock means in its releasable engagement with said guide bars.

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