May 20, 1958 W. J. DOBKIN 2,835,544

COLLAPSIBLE TABLE OF THE TYPE HAVING A TABLE TOP AND FOLDABLE LEGS

Filed Aug. 19, 1955

Fig. 1

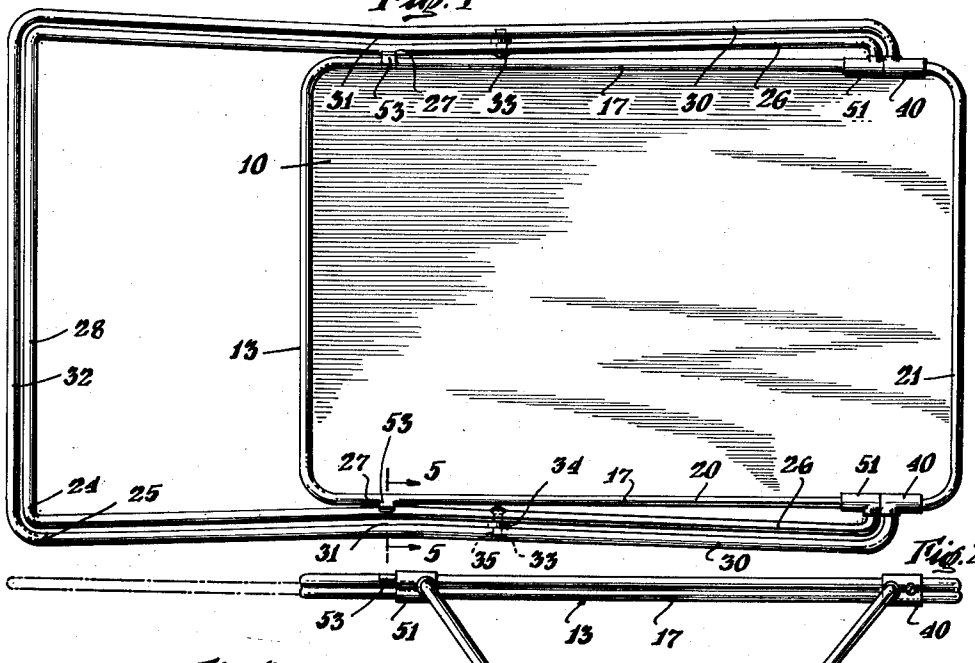
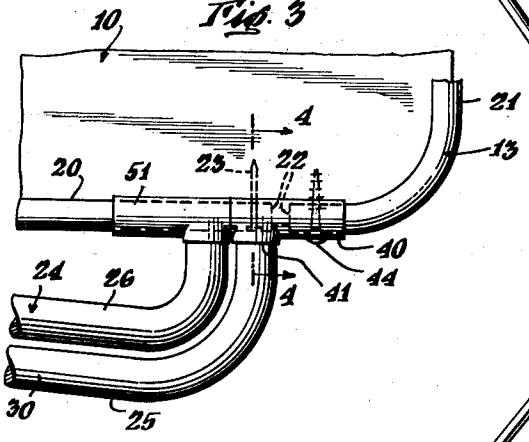


Fig. 2

Fig. 3



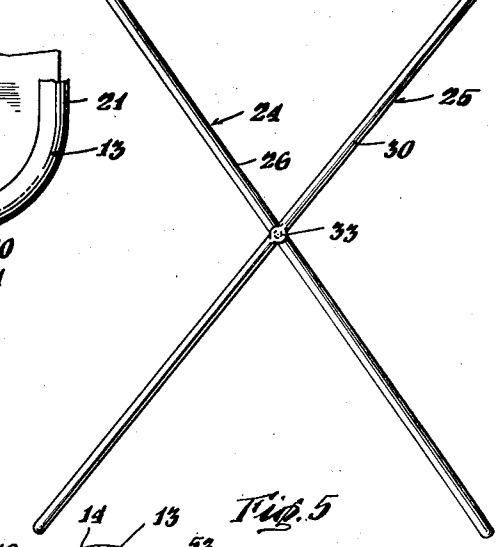


Fig. 4

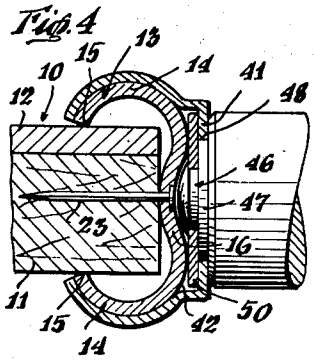
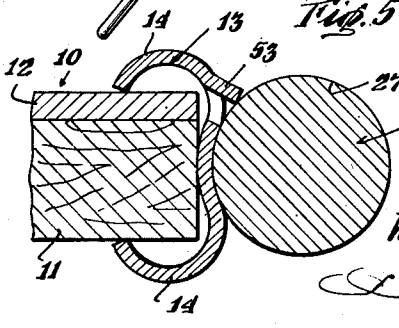


Fig. 5



INVENTOR

William J. Dobkin

BY

L. Augustus Somma

ATTORNEY

United States Patent Office 2,835,544 Patented May 20, 1958

2,835,544

COLLAPSIBLE TABLE OF THE TYPE HAVING A TABLE TOP AND FOLDABLE LEGS

William J. Dobkin, Jackson Heights, N. Y.

Application August 19, 1955, Serial No. 529,492

5 Claims. (Cl. 311—83)

The present invention relates to collapsible tables.

One object of the present invention is to provide a collapsible table, which can be folded into a compact unit and stacked with similar folded tables into close assemblage for storage, which can be folded for collapse or set up by simple manipulation, which is comparatively inexpensive to manufacture and which has elements, forming part of the means by which the table may be collapsed and set up, arranged and constructed to impart structural strength and rigidity to the table top and to contribute to the decorative appearance of the table when set up.

In accordance with certain features of the present invention, the table comprises a flat table top with a rail extending along each of its side edges and a pair of bars on each side of the table top pivotally connected together intermediate their ends to define cross-legs. One of the legs of each pair has a fixed pivot connection to one edge of the table top near one end, and the other leg is pivotally connected to a runner slidable along the corresponding rail from a collapsed position near the fixed pivot to a set-up position near the other end of the table top. When the table is collapsed, the two pairs of cross-legs flanking opposite sides of the table top lie close to and in the plane of the table top. In this condition, the table is flat and thin with no parts projecting from either surface of the table top and will consequently stack compactly and closely against other similar collapsed tables, assuming that the table forms part of a set.

The rails serve not only as guides for the leg runners as described, but also serve as a raised rim or lip for the table top, impart rigidity to the table top without adding materially to the thickness thereto; and also add to the decorative appearance of the table.

As a further feature, the four legs are formed by two U-shaped bars, having their adjoining sides pivotally connected together for cross extension in set-up position, and nesting one closely inside the other in collapsed position. The connecting end pieces between these sides impart rigidity to the legs and serve as a means by which the collapsed table can be suspended from a wall for storage.

Various other objects, features and advantages of the invention are apparent from the following description and from the accompanying drawings, in which

Fig. 1 is a top plan view of the table embodying the present invention and shown in collapsed condition;

Fig. 2 is a side elevation of the table and shows in full lines the table in extended set-up position and in dot and dash lines the table in collapsed condition;

Fig. 3 is a detail top plan view of part of the table showing the connections of a pair of legs on one side of the table top to said table top;

Fig. 4 is a detail section of the table taken on lines 4—4 of Fig. 3 but shown on a larger scale; and

Fig. 5 is a detail section of the table taken on lines 5—5 of Fig. 1 but shown on a larger scale.

Referring to the drawings, the invention is shown applied to a table in the form of a cocktail, coffee or snack table, which may form part of a set designed to be stored when the tables thereof are collapsed, and which may be set up alongside of a chair for cocktails, food or the like. These tables, for example, may have a top of about 12" x 16" and when set up, may be about 17 inches high. However, the invention is equally applicable to any other types of table, where it may be desirable to collapse the table for convenient storage.

The table comprises a flat table top **10**, which may consist of a sheet **11** of plywood having a finishing coating **12** of plastic material, such as Bakelite (phenolic). This table top **10** is rectangular in shape except perhaps for rounded corners, and around the edge of said table top is secured a moulding strip **13** shown in the form of a channel, made for example, by extrusion from aluminum, and receiving the marginal sections of the table top. The edging strip **13** is generally of **C** cross-section and has upper and lower similar curved sections **14** straddling the border of the table top **10** with the edges **15** of these sections seated against the opposite surfaces of said table top and merging with unbroken curvature into an inwardly curved intermediate section **16**. The opposite sides **17** of this edging strip **13** serve as pivot supporting means and as rails for the legs, as will be more fully described.

To afford ease in assembling, the edging strip **13** consists of two separate complementary U-shaped sections **20** and **21** of different lengths having their opposite ends **22** in confronting relationship near one end of the table top on the sides of said table top. The longer strip section **20** is connected to the table top **10** by means of nails **23**.

For supporting the table top **10** in elevated position, there are provided two round U-shaped bars **24** and **25** of generally rectangular shape, dimensioned to permit one of said bars to nest into and lie close to the other bar in the plane thereof, and the smaller inner bar **24** to straddle the table top **10** in the plane of said table top and to lie close thereto, in collapsed condition of the table, as shown in Fig. 1. This inside bar **24** has side legs **26**, each widely angled inwardly towards an apex or knee **27** and a connecting end section **28** between said legs and the outside bar **25** has side legs **30**, each inwardly angled parallel to the corresponding leg **26** of the inside bar towards an apex **31**, and a connecting end section **32** between said outer legs. The two legs **26** and **30** on each side are pivotally connected together by means of a pivot **33** extending diametrically through the inner leg **26** and having a collar **34** integral or otherwise affixed thereto and located between the two legs. The inner end of the pivot pin **33** is upset against the inner leg **26** to connect permanently the pin to this inner leg and the outer end section **35** of said pin projecting beyond the collar **34** extends radially into the outer leg **30** with a free snug rotative fit.

With the two bars **24** and **25** constructed as described, they can be collapsed into a single plane in the plane of the table top **10**, as shown in Fig. 1, and in this collapsed condition, the apices **27** of the side legs **26** will be close to the corresponding sides **17** of the edging strip **13**, the two legs **26** and **30** will be spaced only somewhat sufficiently to permit the two bars to be relatively displaced angularly and freely about the axes of the pivot pins **33** when setting up the table, and the two connecting sections **28** and **32** at one end of the side legs **26** and **30** will be spaced a substantial distance from the corresponding end of the table top **10**. In this collapsed condition of the table, the outer legs **30** at their other ends will project outwardly beyond the inner legs **26** sufficiently

to permit these ends of the outer legs to be pivotally connected to the sides of the table top **10** through the edging strip **13**, as will be more fully described.

For connecting the outer legs **30** to the table top **10**, there are provided two brackets **40**, each in the form of a channel, curvedly shaped at the top and bottom to conformably embrace the edging strip **13** at the top and bottom with a slide fit for assembly, but having an intermediate flat section **41** spaced from the inwardly curved intermediate section **16** of said edging strip to define a space **42** therebetween to receive the head of a pivot for the outer leg, as will be more fully described. These brackets **40**, which are desirably made of metal matching the metal of the edging strip **13**, as for example of aluminum are located near one end of the table directly opposite each other and are fastened to the shorter section **21** of the edging strip **13** and to the table top **10** by screws **44**. The brackets **40** extend across the opposed ends **22** of the edging strip **13** to cover and conceal the junctures between these ends.

To form fixed pivot connections between the bracket **40** and the ends of the outer legs **30** respectively, the outer end of each of these legs is offset inwardly towards the table top **10** and has integral therewith or otherwise affixed thereto a reduced stepped neck **46** with a collar **47** integral therewith fitting snugly in a hole **48** in the intermediate flat section **41** of the bracket, and this neck beyond said collar passes with a snug fit through a flat bearing disc **50** located between said intermediate bracket section **41** and the edging strip **13** and connected to said collar by the upsetting of the end of this neck against the disc. With this construction, the outer U-bar **25** defining the outer side legs **30** may be swung angularly about aligned pivot axes fixed in relation to the table top **10**.

The inner legs **26** are pivotally and slidably connected to the edges of the table top **10**, and for that purpose, the outer end of each of these legs is offset inwardly towards the table top and is pivotally connected to a runner or slide **51**. These runners or slides **51** are similar to the brackets **40** pivotally supporting the outer legs **30**, the only differences being that the runners **51** are reversed in relation to the brackets **40** and are not affixed to the table top by screws as in the case of said brackets **40** but are free to slide along the rail sides **17** of the edging strip **13**. Also, the pivotal connections between the inner legs **26** and the runners **51** are the same as the pivotal connections between the outer legs **30** and the brackets **40**.

To limit the collapsing movements of the legs **26** and **30** into the plane of the table top **10**, and to limit the slide movements of the runners **51** along the side rails **17** in set-up condition of the table, each of said side rails has on its upper side a tab **53** cut out and stamped outwardly therefrom to form a stop for the corresponding inner leg **26** when said inner leg reaches the plane of the table top, thereby preventing said legs from moving beyond said plane. It should be noted that the intermediate inwardly curved section **16** of the edging strip **13** conforms approximately in curvature to the circumferential curvature of the inner leg stock and the stops **53** are disposed opposite the apices **27** of the inner legs **26**. These apices **27** of the inner legs **26** are located inwardly of the outer sides of the edging strip **13**, and the legs **26** and **30** have sufficient resiliency to cause said apices in the process of collapsing the table to snap beyond the lower sections **14** of the strip and into the pockets defined by the intermediate inwardly curved section **16** of the edging strip **13**, thereby causing said inner legs to be latched in said collapsed position. Slight pressure on the inner legs **26** through manipulation of the end connecting sections **28** and **32**, will cause said legs to snap out of latch engagement with the edging strip **13**.

The tabs **53** serve not only as stops to prevent the legs **26** and **30** from going beyond the plane of the table top **10** in collapsed condition of the table, but are disposed in the path of the runners **51** near one end of the table top to serve as stops in the set-up condition of the table. The tabs **53** are for that reason so located as to stop the runners **51** at a distance from the adjacent end of the table top which is greater than the distance of the brackets **40** from the opposite end of the table top, to permit the legs to be folded in the plane of the table top **10** for collapse or to be extended into position to support the table top in horizontal position.

The table can be easily assembled by first slipping endwise the brackets **40** and runner **51** with the legs **26** and **30** pivotally connected thereto, over the ends of the long strip section **20**. This strip section **20** with attached brackets **40** and **51** drawn back sufficiently to expose the end sections of said strip section, is slipped and fitted over a part of the edge of the table top **10**, and the nails **23** hammered through said exposed ends of the strip section and through the table top **10**, to affix the strip section **20** onto the table **10**. If desired, the brackets **40** and **51** may be slipped over the strip section **20** after it has been affixed to the table top **10** by the nails **23**. The shorter strip section **21** is then fitted over the other part of the edge of the table top **10** and the brackets **40** drawn forward from the strip section **20** over the ends of the strip section **21** to span the gap or juncture between the ends **22** of the two strip sections **20** and **21**. In this position of the strip section **21** and brackets **40**, the screws **44** are applied by passing these screws through the brackets and through the strip section and threading into the table top **10**, thereby affixing the strip section **21** onto said table top and at the same time affixing the pivot brackets **40** to said strip section and to the table top. By means of the nails **23**, the strip section **20** is affixed to the brackets **40** and to the table top **10**, and by means of screws **44**, the strip section **21** is affixed to said bracket and to the table top. The two strip sections **20** and **21**, the brackets **40** and the table top **10** are thereby rigidly secured together and may be disassembled for repair or cleaning by a simple operation reversed from that of assembling described.

The operation of the table is believed apparent but is summarized herein. In collapsed position, the legs **26** and **30** are folded in the plane of the table top **10**, with the apices **27** of the inner legs **26** latched into the pockets defined by the intermediate inwardly curved section **16**, and limited in said planar position by the stops **53** and the runners **51** are located near or engaging the brackets **40**. In this collapsed position, the end connecting sections **28** and **32** of the bars **24** and **25** defining the side legs **26** and **30**, extend beyond the adjoining end of the table top in the plane thereof, and no parts project beyond the plane of the edged table top. The resulting collapsed structure is flat and thin and a number of these tables so collapsed may be stacked or placed face to face into a compact group and supported from the end connecting sections **28** and **32** of the bars **24** and **25** by hooks or nails on a wall. These end connecting sections **28** and **32** of the bars **24** and **25** also serve as handles by which the collapsed tables may be conveniently carried or manipulated into set-up position.

For setting up the table, the two bars **24** and **25** are pulled out of the plane of the table top **10** about the pivotal supports of said bars on the edge strip **13** and at the same time the inside bar **24** is swung out of the plane of the outside bar **25**, to cause the runners **51** pivotally secured to said inside bar to slide from the brackets **40** along the rails **17** forming the sides of said edging strip. This operation brings the bars **24** and **25** down into crossed relationship, until the runners **51** on the inside bar **24** reach the stops **53**. In this position, the table is stably set up in horizontal position, as shown in full lines in Fig. 2.

By reversing the operation described, the table can be collapsed for storage.

The edging strip **13** serves not only the utilitarian functions described but also serves as a raised rim to prevent

objects on the table top **10** from sliding off and also as a means for imparting structural rigidity to the table top. In addition, the edging strip **13** adds to the decorative appearance of the table.

The U-shaped construction of the bars **24** and **25** defining the legs **26** and **30** of the table, not only serve to present the connecting end sections **28** and **32**, by which the collapsed table may be carried or supported from a wall hanger or manipulated into set-up position to cause movements of the two legs of each bar simultaneously, but also imparts rigidity to the side legs **26** and **30**, prevents the digging of the lower ends of these legs into the floor or covering thereof, and serves to retain the table against shifting movement across the floor.

While the invention has been described with particular reference to a specific embodiment, it is to be understood that it is not to be limited thereto, but is to be construed broadly and restricted solely by the scope of the appended claims.

What is claimed is:

1. A table comprising a flat table top, rails along and beyond the opposite extreme sides of said table top, a pair of legs on each side of said table top pivotally connected together intermediate their ends permitting said legs to be folded into substantially the same plane or extended into crossed relationship, one of the legs of each pair being pivotally connected to the corresponding extreme side of the table top near one end of the table for pivotal movement about a fixed axis in relation to said table top, and a runner pivotally connected to the other leg of each pair at one end and engaging the rail on the corresponding side of the table top with a slide fit, permitting said runner to move from a position near said fixed axis near one end of the table top to a region near the opposite end of the table top, the two pairs of legs blanking the extreme sides of the table top, whereby the two legs on each side of the table top are permitted to extend in crossed relationship into table top supporting position or folded alongside of and beyond the corresponding extreme side of the table top substantially in the plane thereof.

2. A table comprising a table top, a channel strip around said table top with the edge of said table extending into said strip, the section of said strip along the sides of said table top serving as rails, a pair of legs on each side of the table top pivotally connected together at their intermediate sections for extension into crossed relationship for table top support or for collapse into the same plane, one of said legs of each pair having a pivotal connection at one end with said rail, and a runner pivotally connected to the other leg of each pair at one end and slidable along the corresponding rail, whereby said legs are permitted to be folded alongside of the table top into table collapsing position or extended into crossed position to support the table top.

3. A table as described in claim 2, wherein said channel strip extends beyond the upper face of the table top to form a raised rim therearound.

4. A table comprising a table top, a pair of rails secured to the extreme sides of the table top, a pair of U-shaped bars nesting one inside the other and having their side legs flanging the extreme sides of the table top, one of said bars having its ends pivotally connected to the opposite extreme sides respectively of the table tops, a pair of runners pivotally connected to the opposite ends of the other bar respectively and slidable along the opposite extreme sides of the table top, the legs of said bars on each side of the table top being pivotally connected together intermediate their ends, whereby said bars may be folded alongside of and beyond said table top in the plane thereof in collapsed position of the table top or extended into crossed position into table top supporting position, each leg of the inner bar being angled towards an apex, and the rails having conformations causing said apices to be latched to said rails automatically when said legs are collapsed in the plane of said table top.

5. A table comprising a table top, a pair of U-shaped complemental edging strip sections of channel formation extending around and receiving the edge of said table top, said edging strip sections being of different lengths, whereby the junctures thereof are near one end of the table top, the sides of the strip sections defining rails, a pair of brackets embracing said strip sections at the junctures thereof with a slide fit and covering said junctures, means securing said brackets against slide movement along said strip sections, means securing the edging strips to the table top against separation therefrom, a pair of U-shaped bars nesting one inside the other and having their side legs flanking the sides of the table top, the outside bar having its side legs pivotally connected at one end to said brackets, and a pair of runners pivotally connected to the ends respectively of the legs of the other bar and slidable along the sides respectively of the longer edging strip section, the legs of said bars on each side of the table top being pivotally connected together intermediate their ends, whereby said bars may be folded alongside of said table top in collapsed position of the table top or extended into crossed position into table top supporting position.

References Cited in the file of this patent

UNITED STATES PATENTS

163,122	Wheeler	May 11, 1875
291,525	Long	Jan. 8, 1884
748,956	Johnson	Jan. 5, 1904
1,994,364	King	Mar. 12, 1935
2,114,912	Cox	Apr. 19, 1938
2,288,737	Page	July 7, 1942
2,581,023	Jerick	Jan. 1, 1952
2,666,682	McCormick	Jan. 19, 1954

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 2,835,544 May 20, 1958

William J. Dobkin

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 5, line 36, for "blanking" read -- flanking --; column 6, line 6, for "flanging" read -- flanking --.

Signed and sealed this 22nd day of July 1958.

(SEAL)

Attest:

KARL H. AXLINE

Attesting Officer

ROBERT C. WATSON

Commissioner of Patents