Feb. 20, 1951 B. COHEN ET AL 2,542,394

FOLDABLE TABLE

Filed Aug. 25, 1948 2 Sheets-Sheet 1

Fig. 1

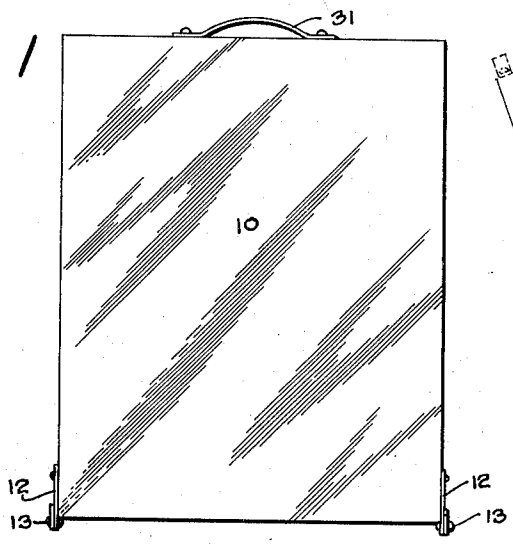


Fig. 2

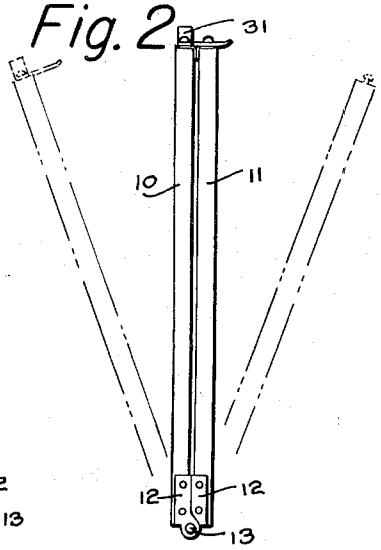


Fig. 3

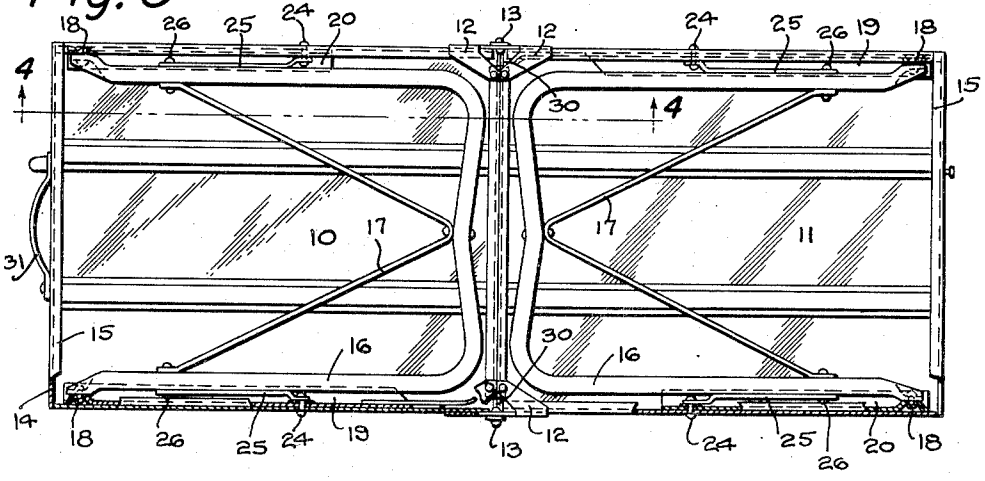
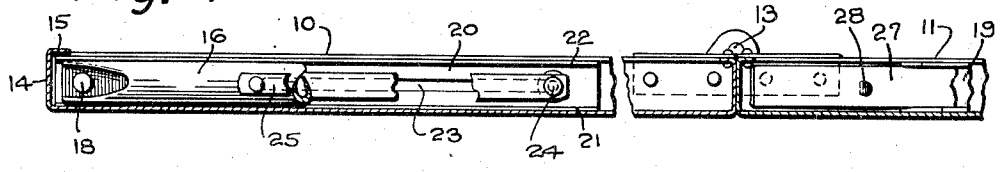


Fig. 4



INVENTOR.

BORIS COHEN

BY JOSEPH PUCCI

Leon Edelson

Attorney

Feb. 20, 1951 B. COHEN ET AL 2,542,394

FOLDABLE TABLE

Filed Aug. 25, 1948 2 Sheets-Sheet 2

Fig. 5

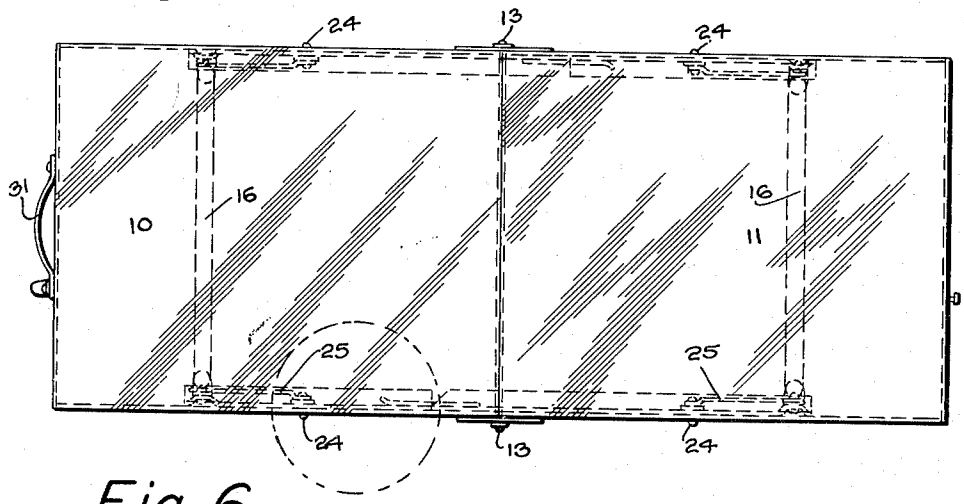


Fig. 6

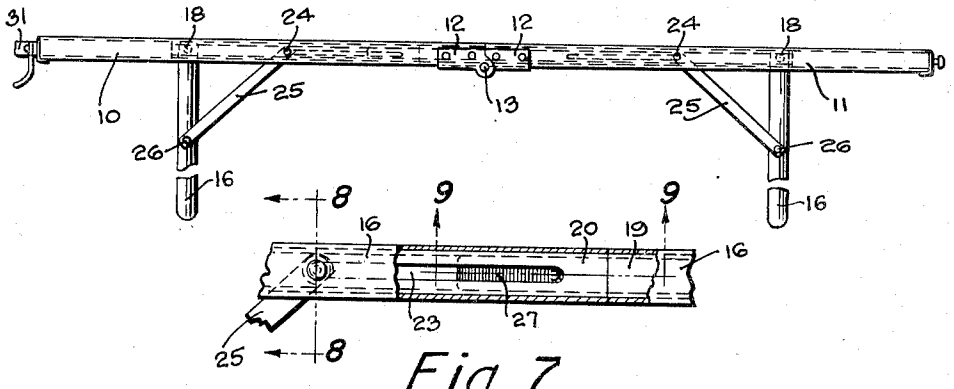
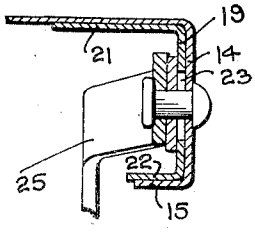
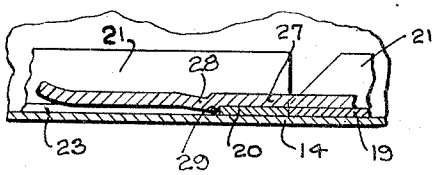


Fig. 7

Fig. 9

Fig. 8





INVENTOR.
BORIS COHEN
BY JOSEPH PUCCI
Leon Edelson
Attorney

Patented Feb. 20, 1951

2,542,394

UNITED STATES PATENT OFFICE

2,542,394

FOLDABLE TABLE

Boris Cohen and Joseph Pucci, Philadelphia, Pa.

Application August 25, 1948, Serial No. 46,003

6 Claims. (Cl. 311—90)

1

This invention relates to improvements in foldable tables and has as its principal object the provision of a strong and durable table constructed entirely of metal which is adapted to be readily folded into a portable, compact unit so that it may be conveniently stored or carried about from place to place.

A further and important object of the present invention is to provide a foldable table the supporting legs of which are so operatively associated with relatively shiftable interengaging bracing elements that when said legs are extended into table supporting relation the bracing elements interengage to rigidify the top of the table and at the same time lock the legs operatively in position to securely support the table top.

A still further object of the invention is to provide a foldable table which is comparatively simple and inexpensive in design and construction, which is strong, durable and extremely rigid in use, and which is adapted for a wide variety of uses, the table top being formed of a pair of hinged sections which are readily extensible into coplanar relation and which when folded together provide a shallow box-like enclosure for the table supporting legs and their operatively associated interengaging bracing elements.

Other objects and advantages of the invention will appear more fully hereinafter, it being understood that the present invention consists substantially in the combination, construction, location and relative arrangement of parts, all as described in detail hereinafter, as shown in the accompanying drawings and as finally pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan view of the table as it appears when in folded condition;

Figure 2 is an edge elevational view of the folded table;

Figure 3 is a plan view showing the bottom of the table when the top sections thereof are extended into coplanar relation;

Figure 4 is a longitudinal sectional view taken on the line 4—4 of Figure 3;

Figure 5 is a top plan view of the table as set up for use;

Figure 6 is a side elevational view of the table shown in Figure 5;

Figure 7 is an enlarged side elevational view partially in section of that portion of the table inscribed within the dotted circle of Figure 5;

Figure 8 is a transverse sectional view as taken along the line 8—8 of Figure 7; and

Figure 9 is a longitudinal sectional view as taken along the line 9—9 of Figure 7.

Referring now to the drawings in detail, it will be observed that the top of the foldable table as

2

constructed in accordance with the present invention is divided transversely midway of its length to form a pair of identical sections respectively designated 10 and 11, these table top extensions being hingedly secured together by a pair of transversely spaced hinge units, each consisting of a pair of hinge elements 12—12 respectively secured to the adjoining corners of the table top sections 10 and 11 and interconnected by a hinge pin 13. The hinged table top sections 10 and 11 are each characterized by a depending flange 14 extending around the full perimeter of the table top section, the depending flange being inwardly turned, as at 15, to provide each table top section with a marginal edge of inwardly presenting channel-shaped formation. The depth of the marginal channel of each of the table top sections 10 and 11 is such that when said sections are folded together, as shown in Figure 2, a space is provided between the parallel panels of said sections which is adequate to house the folded supporting legs for the table and their operatively associated bracing elements to be presently described.

Operatively associated with each of the table top sections 10 and 11 is a table top supporting member 16 of generally U-shape, the opposite parallel legs of which are suitably reinforced and braced by an interconnecting V-shaped element 17. The laterally spaced outer extremities of each U-shaped table top supporting member 16 are respectively hingedly connected, as at 18—18, to longitudinally shiftable members 19 and 20 respectively nested within the opposite longitudinally extending side channels of the table top section. These longitudinally shiftable members 19—20 are each of channel-shaped cross section, as shown most clearly in Figure 8, the upper flanges 21 of said members being disposed in flatwise engagement with the top panel of the table, while the lower flanges 22 thereof are respectively in engagement with the inturned flanges 15 of the table top. Each of the longitudinally shiftable channel-shaped members 19—20 is longitudinally slotted, as at 23 (see Figures 4, 7 and 8), and projecting through the slot of each of the members 19—20 operatively associated with each of the table top sections 10 and 11 is a fixed pivot pin 24, these pins 24 being in the form of oppositely headed rivets or studs which project laterally through the longitudinally extending side flanges 14 of the table top sections. Pivotally connected at one end thereof to each of the fixed pivot pins 24 is a link 25 the opposite end of which is pivotally connected, as at 26, to a side leg of the table-supporting member 16.

Normally, each of the U-shaped table-supporting members 16, when the table is not in use, is disposed flatwise against the undersurface of the top panel of the section with which it is asso-

ciated, as shown most clearly in Figures 3 and 4, in which folded position of the table-supporting member 16 the links 25 connected to opposite legs thereof are disposed in positions closely adjoining and paralleling the opposite legs of the member 16, while the operatively associated members 19—20 are so shifted outwardly toward the outer end of the associated table top section as to present their hinged connections 18—18 with the member 16 immediately adjacent the outer or free end of the table top section.

When the table-supporting members 16 are each swung into position for supporting the table, that is, substantially at right angles to the table top sections with which they are respectively associated, as shown in Figure 6, the members 19—20 are each shifted inwardly at the same time that the connecting links 25 shift into angular relation with respect to the opposite side legs of the table-supporting member 16. During this shifting of the table-supporting members 16 from their folded positions shown in Figure 3 into their table-supporting positions shown in Figure 6, the hinged connections 18—18 between the outer free ends of the U-shaped member 16 and the shiftable members 19—20 move with the members 19—20 and in the plane of shifting movement of the latter. When the leg-supporting members 16—16 are oppositely swung into parallel table-supporting position, as shown in Figure 6, the links 25 serve to brace the legs and hold them in rigid right angular relation with respect to the extended table top sections 9 and 10.

In order to prevent collapse of the table top along the hinge line of the table top sections 10 and 11, the shiftable members 19—19 are each formed of such length that when inwardly shifted to their full extent, as when the table-supporting members 16—16 are swung into right angular relation with respect to their associated table top sections 10 and 11, they project beyond the transverse fold line of the hinged table top sections and so maintain the latter in horizontally extended coplanar relation. It will be noted that the shiftable members 19—20 associated with each table top section are reversely arranged in the two sections so that the long member 19 of section 10 extends along one side of the table, while the corresponding long member 19 of the table top section 11 extends along the other side of the table. Thus, when the table is set up, as shown in Figures 5 and 6, the long shiftable members 19—19 are diagonally opposite one another with each projecting across the transverse flat line of the hinged table top sections, while the cooperating short shiftable members 20—20 are also disposed diagonally opposite one another but with their inner ends terminating short of the said transverse flat line of the table.

In order to lock the table in its open or unfolded condition, as shown in Figure 7, each of the diagonally opposed relatively long shiftable members 19—19 is provided at its free inner end with an extension member 27, this latter being welded or otherwise secured, as at 28, to the shiftable member 19 in such manner that the member 27 may ride over and upon the member 20, as shown in Figure 9. The extension member 27 may, of course, be formed, if desired, as an integral part of the member 19 instead of being welded thereto as a separate element, it being only necessary in either case that the extension be offset from the main body of the member 19 to an extent sufficient to permit the member 20 to shift freely between the extension and the side

flange 14 of the table top. Each of the offset extensions 27—27 is provided with a punched-in depression 28 to provide a detent, as at 29, which is adapted to project into the slot 23 of the member 20 and engage the inner end of said slot, as shown most clearly in Figures 7 and 9, to frictionally hold the members 19 and 20 in more or less closely abutting relation. The inherent resiliency of the offset extensions 27—27 provide for adequate inner engagement of each pair of the members 19 and 20 when the same are shifted into their extreme positions toward each other, while providing for quick release of said interengaged members upon shifting the table top supporting members from their parallel relation shown in Figure 6 to their folded relation shown in Figure 3.

In order to permit projection of the shiftable members 19—19 across the fold line of the hinged table top sections when the latter are extended into coplanar relation, the inner transverse flanges thereof terminate short of the opposite side flanges to provide free spaces, as at 30—30 (see Figure 3) through which said members 19—19 are free to project.

When it is desired to collapse or fold the table, the table top supporting members 16—16 are swung about their compound pivots 24 and 25 into positions closely paralleling the top panels of the hinged sections 10 and 11, following which the latter are folded together to provide an exceedingly neat and compact unit which may be conveniently stored away or carried from place to place. For carrying purposes one or the other of the hinged sections 10—11 may be provided with a carrying handle 31 which may be of any suitable form and which may be provided with means for interlocking together the hinged table top sections. The handle 31 may, of course, be mounted on one or the other of the opposite free ends of the hinged table sections, or it may be mounted upon one or the other of the side edges thereof. When the table is to be placed in use, it is merely necessary to extend the hinged sections 10 or 11 into coplanar relation and then swing the leg members 16—16 upwardly and oppositely into substantially parallel relation so as to shift each pair of the members 19—20 into abutting interengaged relation as hereinbefore described.

It will be understood, of course, that the table as constructed in accordance with the present invention may be made in various sizes or dimensions and while it is preferable to construct it entirely of metal, it may be made of any other suitable material or combination of materials. It will be understood also that the invention is susceptible of various changes and modifications which may be made from time to time without departing from the general principles or real spirit thereof and it is accordingly intended to claim the same broadly, as well as specifically, as indicated by the appended claims.

What is claimed as new and useful is:

1. A foldable table comprising a pair of top sections hingedly secured together for relative movement about a transverse line disposed substantially midway of the overall length of the table whereby said sections are adapted to be alternatively folded into substantially parallel relation or extended into coplanar relation, a pair of longitudinally shiftable members respectively disposed along opposite side edges of each of said top sections, a supporting member for each top section having leg portions pivotally secured re-

spectively to the outer extremities of each pair of said longitudinally shiftable members, and a pair of link members for each supporting member, each link member having one end thereof pivotally connected to one of said top sections at a fixed point along the side thereof and its opposite end pivotally connected to a leg portion of the supporting member for said top section, said supporting members being operative when moved into approximately right angular relation with respect to their associated top sections to shift said pairs of longitudinally shiftable members toward each other to effect interengagement of the latter and support said table top sections in extended coplanar relation, said supporting members being relatively foldable to present the same and their associated link members in substantially a common plane paralleling that of the top section with which they are associated.

2. In a foldable table of the character defined in claim 1 wherein said table top sections are each formed along their opposite longitudinally extending side edges with inwardly presenting channels and wherein said longitudinally shiftable members are respectively nested in said channels for guided rectilinear movement therein.

3. In a foldable table of the character defined in claim 1 wherein at least one of each pair of said longitudinally shiftable members is of a length sufficient to project a substantial distance beyond the transverse fold line of the table when the top sections thereof are extended into coplanar relation and the supporting members are swung into right angular relation with respect to their associated top sections.

4. In a foldable table of the character defined in claim 1 wherein the proximate ends of the longitudinally shiftable members are respectively

provided with coacting means for releasably interlocking the same when the table is set up for use.

5. In a foldable table of the character defined in claim 1 wherein each of said hinged table top sections is perimetrally flanged to form a shallow tray-like structure within which is adapted to be nested its supporting member and the longitudinally shiftable members and links associated with said supporting member, and wherein upon folding said top sections together an enclosed box-like structure is provided within the interior of which is housed both of the supporting members and their respectively associated parts.

6. In a foldable table of the character defined in claim 1 wherein said longitudinally shiftable members are each longitudinally slotted and wherein corresponding ends of said link members are pivoted to said side edges of the table top sections by pivot bolts fixed to said side edges and projecting through the slots of said shiftable members the latter being rectilinearly shiftable relatively to said pivot bolts.

BORIS COHEN.
JOSEPH PUCCI.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
366,096	Heck	July 5, 1887
643,511	Lloyd	Feb. 13, 1900
1,378,178	Korn	May 17, 1921
1,630,102	Zimmerman	May 24, 1927
2,178,248	Bristow	Oct. 31, 1939
2,326,461	Howe	Aug. 10, 1943