May 1, 1956 C. SHORE 2,743,979

FRAME CONSTRUCTION FOR LIGHT-WEIGHT TABLE

Filed Feb. 26, 1953 4 Sheets-Sheet 1

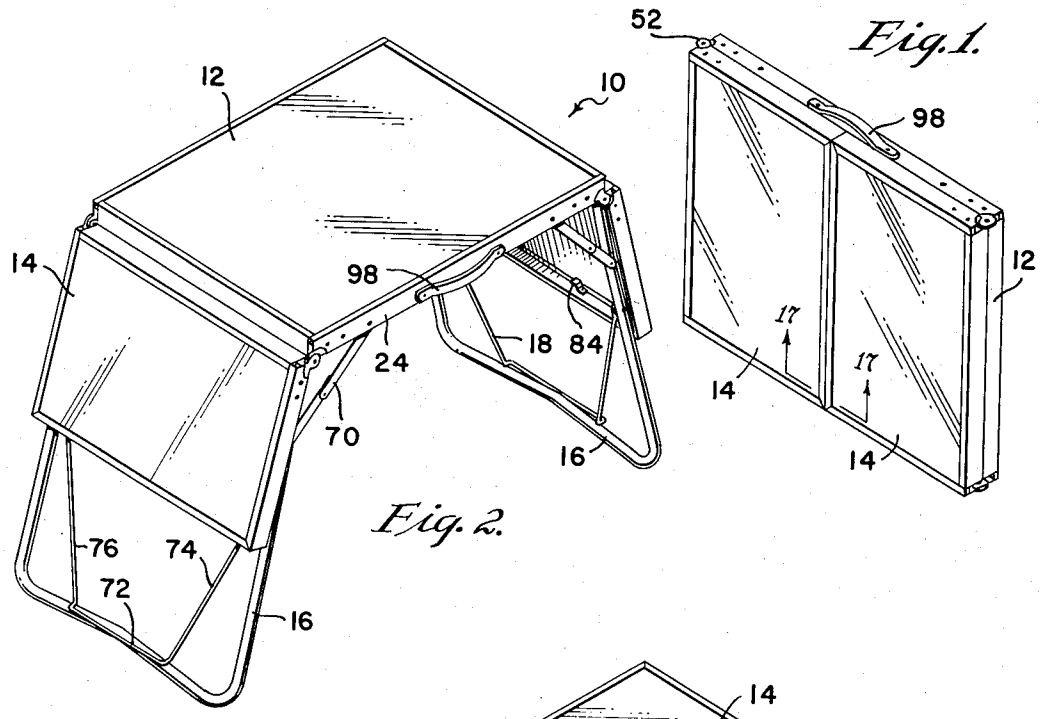


Fig. 1.

Fig. 2.

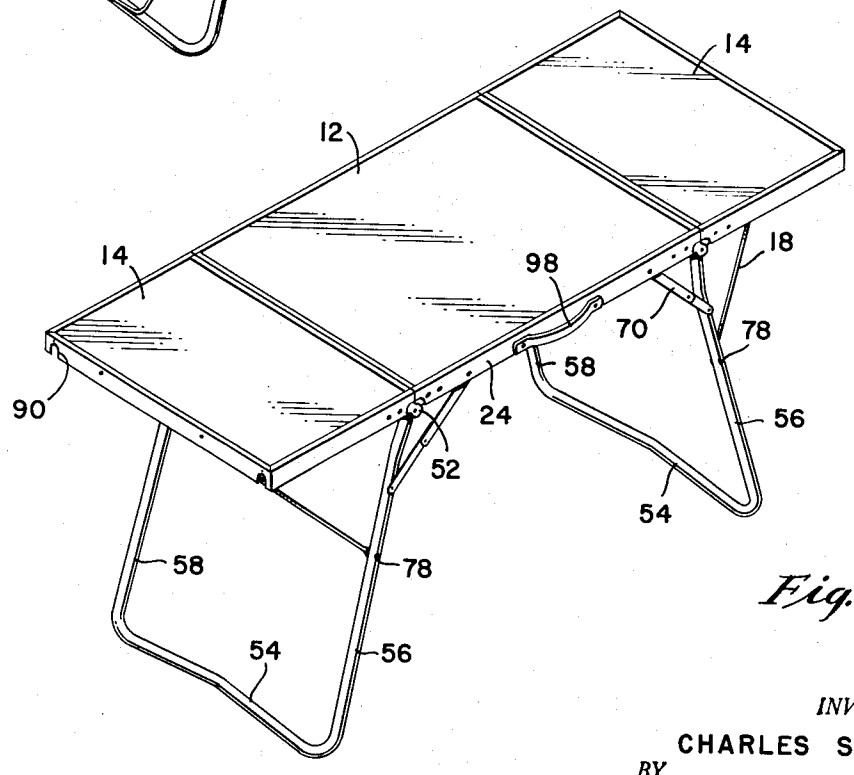


Fig. 3.

INVENTOR.
CHARLES SHORE
BY
Caesar and Rivise
ATTORNEYS.

May 1, 1956 C. SHORE 2,743,979

FRAME CONSTRUCTION FOR LIGHT-WEIGHT TABLE

Filed Feb. 26, 1953 4 Sheets-Sheet 2

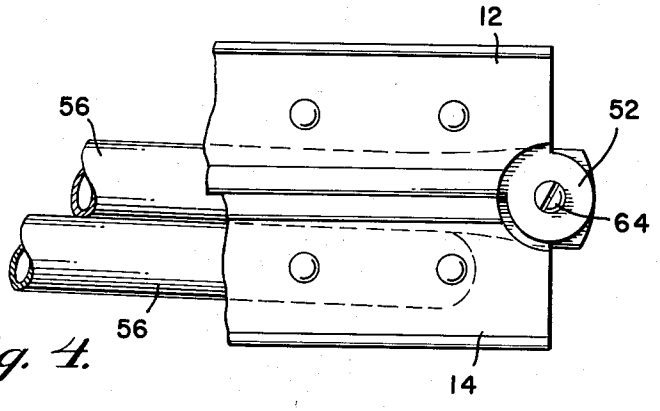


Fig. 4.

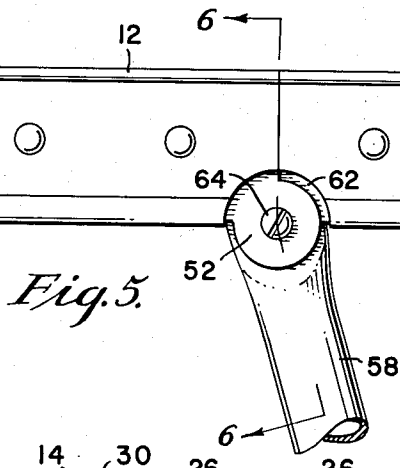


Fig. 5.

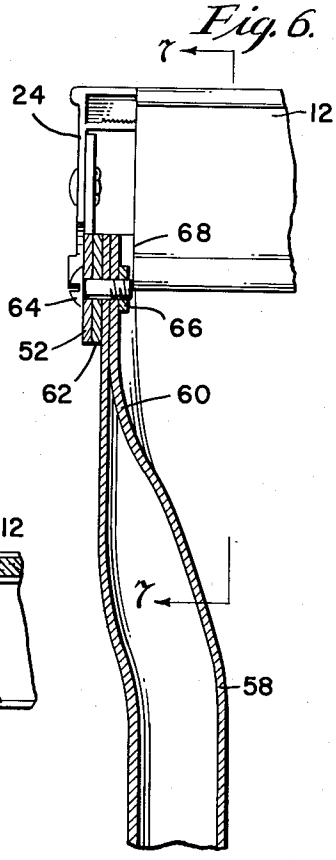


Fig. 6.

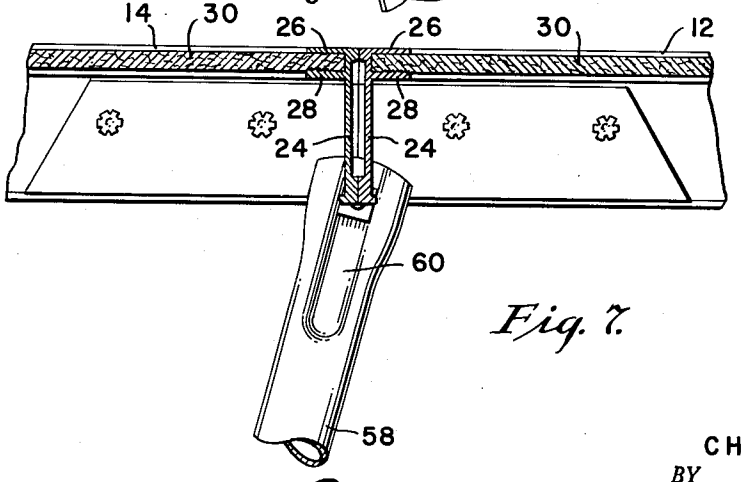


Fig. 7.

INVENTOR.
CHARLES SHORE
BY
Caesar and Rivise
ATTORNEYS.

May 1, 1956 C. SHORE 2,743,979

FRAME CONSTRUCTION FOR LIGHT-WEIGHT TABLE

Filed Feb. 26, 1953 4 Sheets-Sheet 3

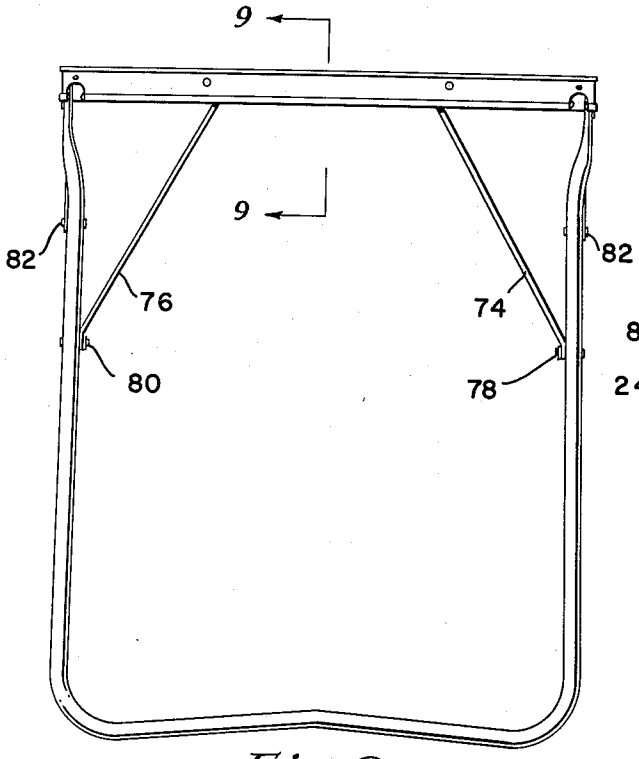


Fig. 8.

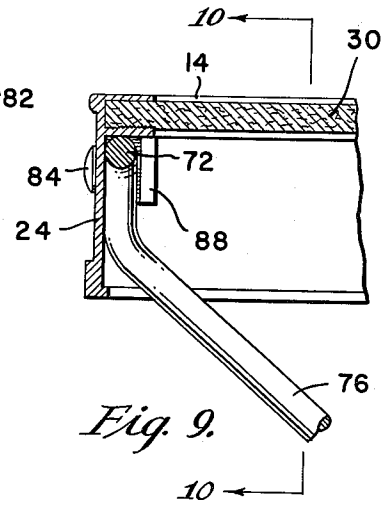


Fig. 9.

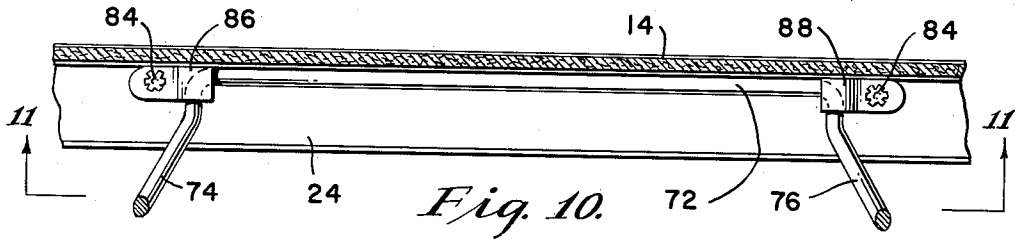


Fig. 10.

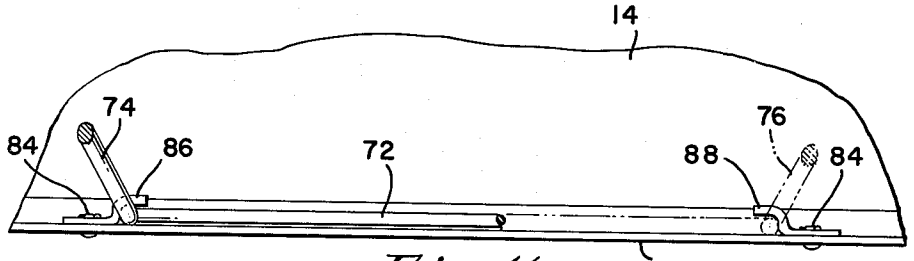


Fig. 11.

INVENTOR.
CHARLES SHORE
BY
Caesar and Rivise
ATTORNEYS.

May 1, 1956 C. SHORE 2,743,979

FRAME CONSTRUCTION FOR LIGHT-WEIGHT TABLE

Filed Feb. 26, 1953 4 Sheets-Sheet 4

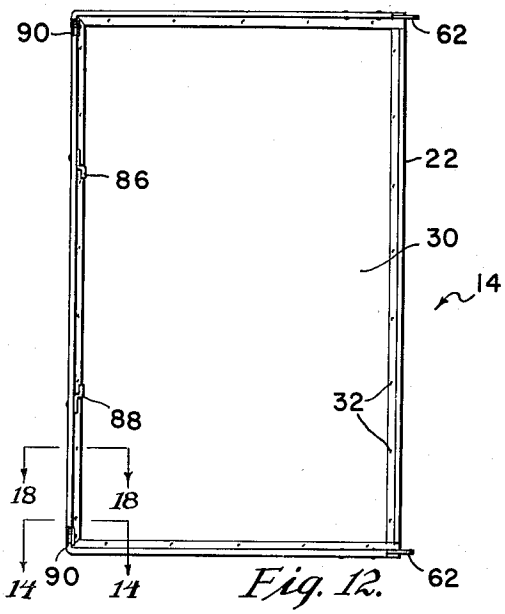


Fig. 12.

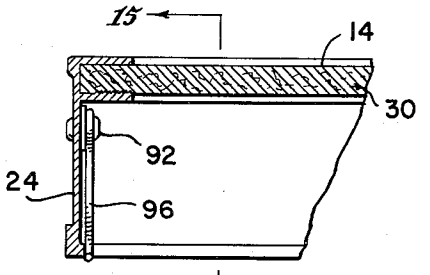


Fig. 14.

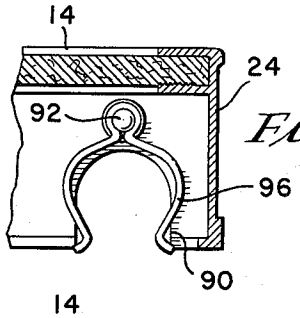


Fig. 15.

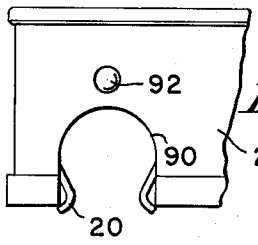


Fig. 13.

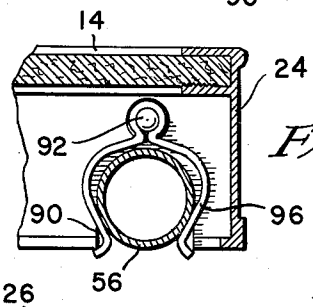


Fig. 16.

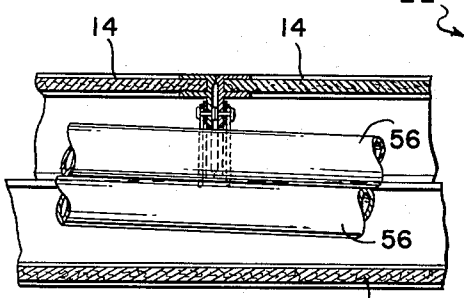


Fig. 17.

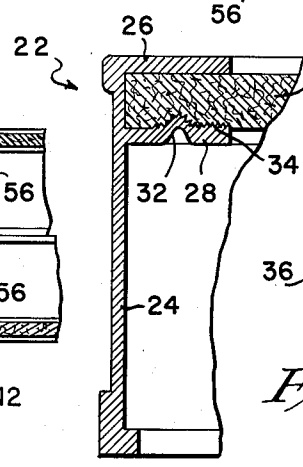


Fig. 18.

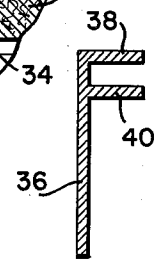


Fig. 19.

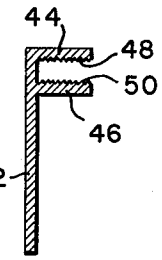


Fig. 20.

INVENTOR.
CHARLES SHORE
BY
Caesar and Rivise
ATTORNEYS.

United States Patent Office

2,743,979

Patented May 1, 1956

2,743,979

FRAME CONSTRUCTION FOR LIGHT-WEIGHT TABLE

Charles Shore, Philadelphia, Pa., assignor to Falco Products Co., Philadelphia, Pa., a corporation of Pennsylvania

Application February 26, 1953, Serial No. 339,039

4 Claims. (Cl. 311—105)

This invention relates to a light-weight folding table with drop leaves.

The primary object of this invention is to provide a light-weight table, preferably fabricated of a combination of aluminum and a light-weight fibrous board such as "Masonite," which can be folded and unfolded with a minimum of manipulation.

Yet another object of this invention is to provide a light-weight folding table of the character described in which both the drop leaves and the supporting legs are pivoted to the central portion of the table on common pivots so that the folding action of the table is simplified.

Another object of this invention is to provide a light-weight folding table of the character described in which the legs are so pivoted to the central portion of the table that when the same is in its fully erect position, the legs are divergent so that each leg lies in a plane beneath each drop leaf and beyond the meeting edge of the central portion of the table and the corresponding drop leaf. This construction substantially reduces the possiblity of tipping or longitudinally rocking movement of the table when a load is placed upon one of the drop leaves.

A further object of this invention is to provide a light-weight folding table with drop leaves and a brace means to support the drop leaves in such a manner as to reduce the possibility of lateral rocking movement of the table when a load is placed upon one of the drop leaves.

A further object of this invention is to provide a light-weight folding table with drop leaves and an easily operated spring clip means for releasably holding both the drop leaves and the legs in folded position against the central portion of the table.

Yet another object of this invention is to provide an economical means for securing light-weight fibrous boards in channel frames making up the central and drop leaf portions of the table.

These and other objects and features of the invention will become more apparent as the following description proceeds in connection with the accompanying drawings, wherein:

Figure 1 is a perspective view of the table in its folded form;

Figure 2 is a perspective view of the table in its erect form with the drop leaves in the unextended positions;

Figure 3 is a perspective view of the table in its erect form with the drop leaves in their extended positions;

Figure 4 is an enlarged elevational view of a corner portion of the table looking down on Figure 1;

Figure 5 is a fragmentary enlarged elevational view of the side of the table showing the pivotal connection of a drop leaf and a leg to the central portion of the table;

Figure 6 is a fragmentary enlarged sectional view taken on the line 6—6 of Figure 5;

Figure 7 is a fragmentary enlarged sectional view taken on the line 7—7 of Figure 6;

Figure 8 is an end elevational view of one of the drop leaves and one of the legs, the drop leaf being shown supported in its extended position;

Figure 9 is a fragmentary enlarged sectional view taken on the line 9—9 of Figure 8;

Figure 10 is a sectional view taken on the line 10—10 of Figure 9;

Figure 11 is a sectional view taken on the line 11—11 of Figure 10;

Figure 12 is a plan view of the underside of one of the drop leaves shown separated from the table;

Figure 13 is a fragmentary enlarged end elevational view of a corner of one of the drop leaves;

Figure 14 is an enlarged sectional view taken on the line 14—14 of Figure 12;

Figure 15 is a sectional view taken on the line 15—15 of Figure 14;

Figure 16 is a view similar to Figure 15 and illustrating the manner in which the spring clip engages a portion of the leg of the table;

Figure 17 is an enlarged sectional view taken on the line 17—17 of Figure 1;

Figure 18 is an enlarged fragmentary vertical sectional view through any one of the table sections, namely the central portion or the drop leaves;

Figure 19 is a reduced vertical sectional view of a modified form of a channel frame employed to make up the central portion and the drop leaves of the table;

Figure 20 is a view similar to Figure 19 and showing another modified form of a channel frame employed to make up the central portion and the drop leaves of the table.

Specific reference will now be made to the drawings wherein similar references are used for corresponding elements throughout.

The present folding table is indicated generally at 10 and comprises the following essential components, namely a central portion 12, a pair of drop leaves 14 pivoted thereto, a pair of legs 16 pivoted to the central portion, a brace means 18 to hold the drop leaves in extended position, as shown in Figure 3, and a means 20 for releasably holding the drop leaves and legs in folded position against the central portion, as shown in Figure 1.

An essential feature of the invention is the provision not only of a folding table but one which is light in weight, portable, strong and stable as well. This is accomplished by the constructional details as will appear hereinafter and by fabricating all of the essential components of a light-weight metal, such as aluminum, or preferably a combination of a light-weight metal and a fibrous material, such as "Masonite."

The central portion 12 and drop leaves 14 are each constructed of a combination of a light-weight metal, such as aluminum, and a fibrous board, such as "Masonite," in a particular manner as shown in greater detail in Figures 18, 19 and 20. A channel frame 22 of aluminum is provided which is substantially F-shaped in cross section and includes a depending skirt portion 24 and a pair of spaced arms 26 and 28. A fibrous or "Masonite" board 30 is received in the channel formed between the arms 26 and 28 of the frame and is anchored therein by swaging or tapping the undersurface of the lower arm 28 to provide spaced indentations 32 which extend into the undersurface of the fibrous board. To increase the gripping action, the inner surface of the lower arm 28 of the channel frame may be serrated as at 34 (Figure 18).

The modification of Figure 19 shows a substantially F-shaped aluminum frame having a skirt portion 36 and spaced arms 38 and 40 forming a channel adapted to receive therebetween the fibrous board. The inner surfaces of the arms 38 and 40 are both smooth and the fibrous board is anchored in the channel formed between

the arms by swaging or tapping the lower arm 40 at spaced intervals as described hereabove.

The modification of Figure 20 shows a substantially F-shaped frame having a skirt portion 42 and spaced arms 44 and 46, both inner surfaces of which are serrated as at 48 and 50. As described in connection with Figures 18 and 19, the fibrous board is adapted to be received in the channel formed between the arms 44 and 46 and there anchored by swaging or tapping the lower arm 46 at spaced intervals.

Thus it will be seen from Figures 1–3 that the flat supporting or upper faces of the central portion 12 and drop leaves 14 are made of a light-weight fibrous board while the edging completely around the central portion and the drop leave constitutes the aluminum frame hereinabove described. The use of a fibrous board, such as "Masonite," increases the rigidity of the table without increasing the weight thereof and also increases the wear, scratch and stain resistance of the supporting faces of the table.

Coming now to the other structural details of the table, it will be seen that the skirt portion 24 of the frame about the central portion 12 of the table, which is substantially rectangular, carries at its corners ears 52 which extend at an angle outwardly from the corners of the central portion of the table. The legs 16 are preferably of aluminum, tubular and generally U-shaped each having a web portion 54 adapted to rest on a floor and leg portions 56 and 58. The upper or free ends of the leg portions 56 and 58 are flattened as at 60 for a purpose soon to appear.

The drop leaves are preferably substantially rectangular and depending from the inner corners of each drop leaf at an inward angle relative to the central portion of the table are further ears 62. These ears abut the inner surface of the ears 52 of the central portion of the table.

A headed bolt 64 extends through each of pair of ears 52 and 62 and through the upper flattened portion 60 of each leg, the headed bolt receiving a nut 66. The skirt 24 of the frame of each drop leaf is cut away at its inner corners as at 68 to allow clearance for the bolt and nut. This construction pivots each drop leaf 14 and each leg 16 to the corners of the central portion 12, the bolts 64 serving as common pivots for both the legs and the drop leaves. This simplifies the folding action of the table because it allows the leg portions 56 and 58 to clear the skirt 24 of the frame of the central portion when they are folded against the central portion as shown in Figures 4 and 17.

The legs and central portion of table are provided with conventional locking braces 70 to hold the legs in their fully extended position as shown in Figures 2 and 3. It is to be noted that in their fully extended position, the legs are divergent extending at an angle to the plane of the table in excess of 90°. This reduces longitudinal rocking or tilting of the table due to a load on one of the extended drop leaves, a tilting frquently encountered with light-weight tables.

The brace means 18 for holding each of the drop leaves in extended position comprises a rod bent to form a web 72 and upwardly convergent legs 74 and 76 when the rod is in its drop leaf-supporting position. The free ends of the legs 74 and 76 of the brace rod are pivoted as at 78 and 80 to the leg portions 56 and 58 of the table legs 16 at points below the attachment 82 of the locking braces 70 to said leg portions 56 and 58. Secured as at 84 to the inner surface of the end portion of the skirt 24 of the frame of each drop leaf are offset lugs or clips 86 and 88 which are spaced inwardly from the outer corners of each drop leaf. These offset lugs engage portions of the web 72 of the brace rod when the latter supports the drop leaf in its fully extended position. By making the legs 74 and 76 of the brace rod upwardly convergent to support the drop leaf at an area inwardly of the corners thereof, lateral tilting or rocking about the longitudinal axis of the table is considerably reduced.

As mentioned hereabove, a means 20 is provided for releasably holding the drop leaves and legs in folded positions against the central portion 12 of the table. This means preferably comprises notches or cut-out portions 90 provided in the outer end of the skirt 24 of the frame of each drop leaf 14 adjacent its corners. Secured by means of a rivet or peened pin 92 to the skirt 24 above each notch is a generally U-shaped spring clip 96 having inwardly tensioned legs extending partially into the notch. When the legs 16 and drop leaves 14 are folded inwardly towards the central portion 12 of the table, the legs overlap, the notches of the drop leaves engage the leg portions 56 and 58 adjacent the transverse central axis of the table and the spring clips 96 also engage the leg portions 56 and 58. The holding action is firm but releasable. A handle 98 is provided to assist in carrying the compact folded table.

Thus it will be seen that a light-weight folding table is provided which has supporting faces that are resistant to wear, scratch and stain, which is sturdy and resists lateral and longitudinal tilting despite its light weight, and which can be folded and unfolded smoothly and easily.

It will be understood that minor variations may be made in the construction and arrangement of parts without departing from the spirit of the invention and the scope of the appended claims.

I claim:

1. In a light-weight table, a section comprising a metallic frame including a channel and depending skirt, a fibrous board fitting into said channel, and means securing said board in said frame, said meanse including spaced indentations in one leg of said channel extending into one surface of said board, the inner face of one of said channel legs being serrated.

2. In a light-weight table, a section comprising a metallic frame including a channel and depending skirt, a fibrous board fitting into said channel, and means securing said board in said frame, said means including spaced indentations in one leg of said channel extending into one surface of said board, the inner faces of both legs of said channel being serrated.

3. In a light-weight table, a section comprising a substantially rectangular metallic frame of F cross-section forming a vertical skirt portion and a pair of spaced arms, a substantially rectangular fibrous board received between the arms of said metallic frame and spaced indentations in one of said arms extending into one surface of said fibrous board, the inner surface of said one of said arms being serrated.

4. In a light-weight table, a section comprising a substantially rectangular metallic frame of F cross-section forming a vertical skirt portion and a pair of spaced arms, a substantially rectangular fibrous board received between the arms of said metallic frame and spaced indentations in one of said arms extending into one surface of said fibrous board, the inner surfaces of both of said arms being serrated.

References Cited in the file of this patent

UNITED STATES PATENTS

561,212	Erstein	June 2, 1896
654,832	Hathaway	July 31, 1900
1,253,673	Dolge	Jan. 15, 1918
1,431,172	Musselman	Oct. 10, 1922
1,984,602	Snyder	Dec. 18, 1934
2,194,421	De Saussure	Mar. 19, 1940
2,253,772	Edgren	Aug. 26, 1941
2,298,578	Madsen	Oct. 13, 1942
2,568,153	Hickman	Sept. 18, 1951
2,594,262	Howe	Apr. 22, 1952
2,628,141	Scheuer	Feb. 10, 1953
2,643,926	Pucci	June 30, 1953