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FOLDING TABLE

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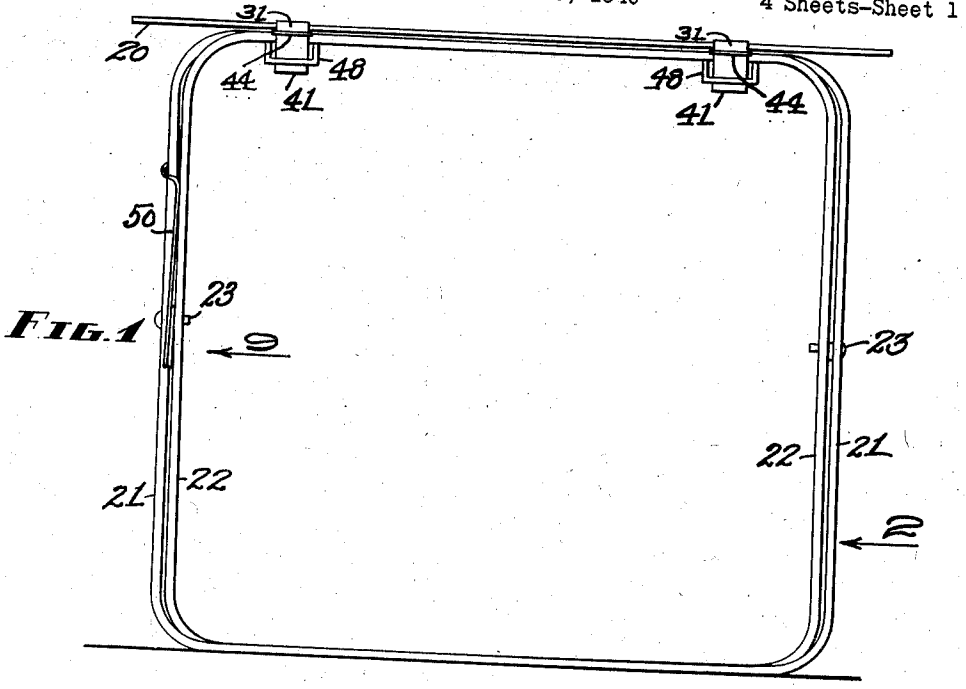


FIG. 1

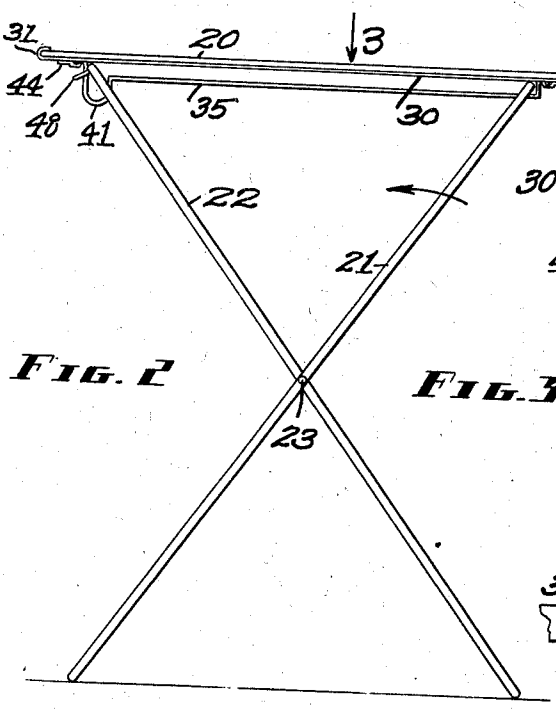


FIG. 2

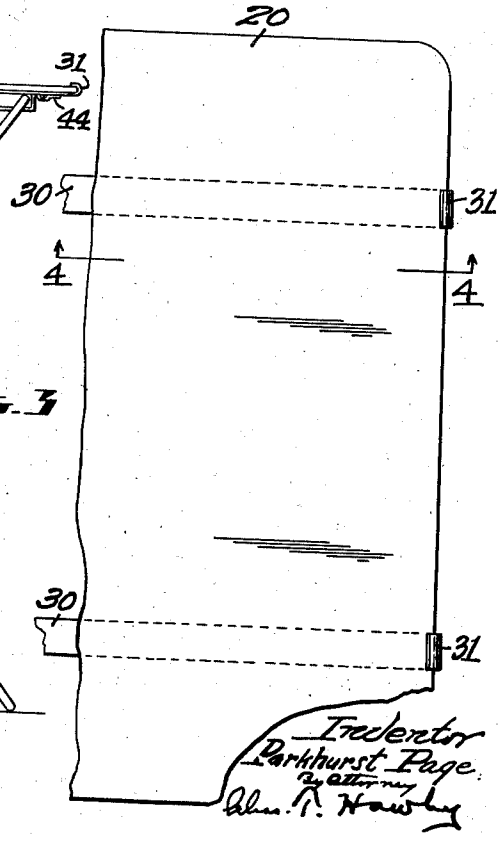


FIG. 3

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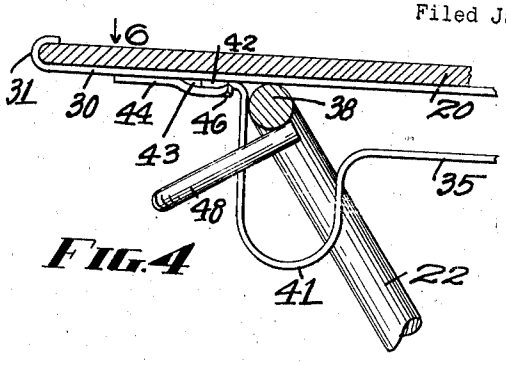


FIG. 4

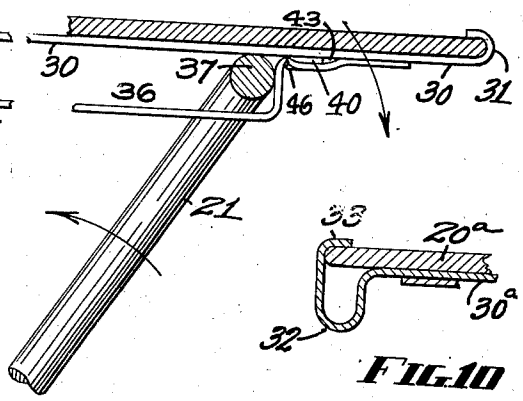


FIG. 10

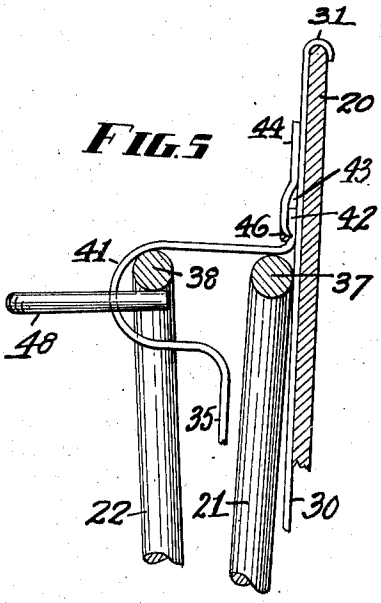


FIG. 5

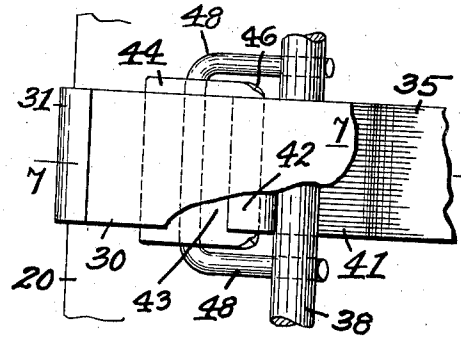


FIG. 6

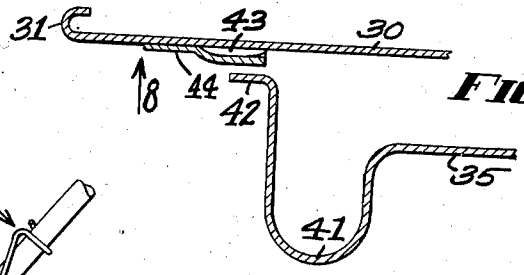


FIG. 7

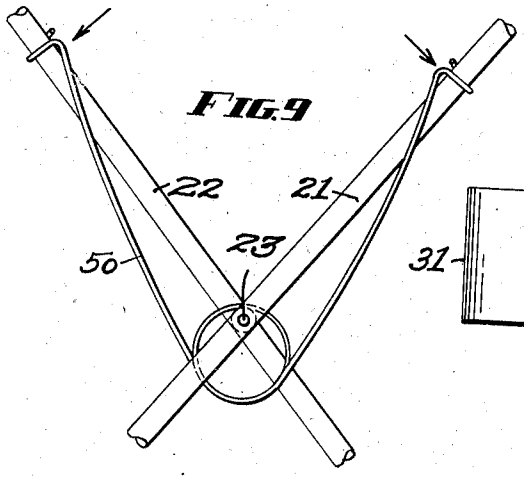


FIG. 9

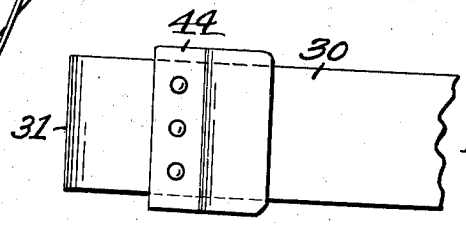


FIG. 8

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July 7, 1942.

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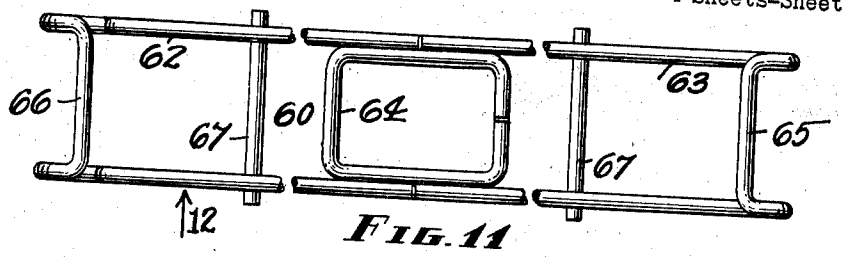


FIG. 11



FIG. 12

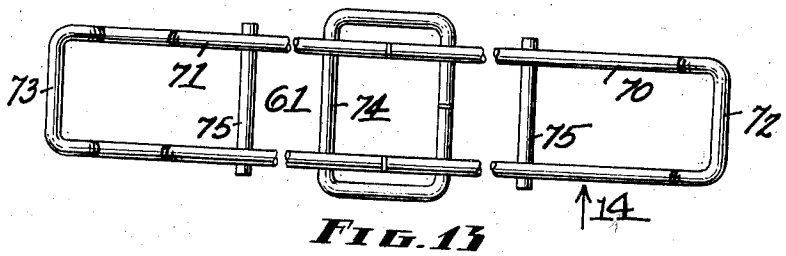


FIG. 13

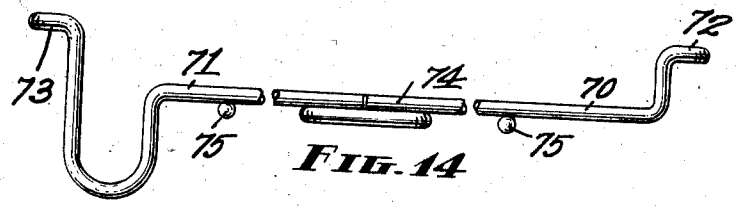
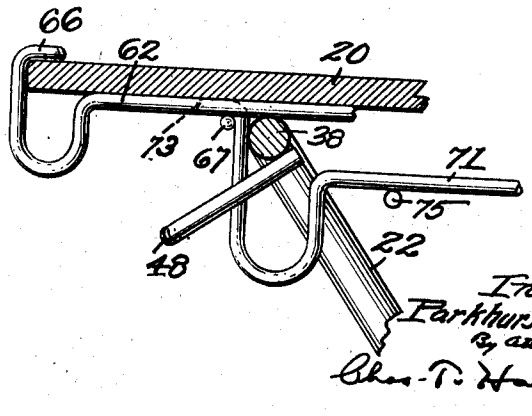


FIG. 14

FIG. 15



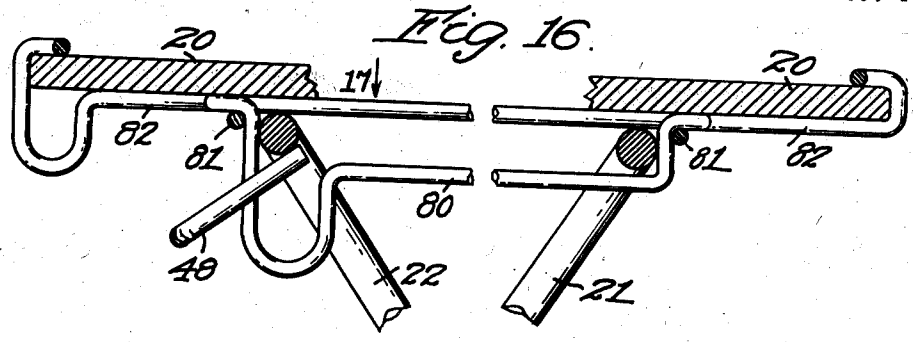
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FOLDING TABLE

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Fig. 16.



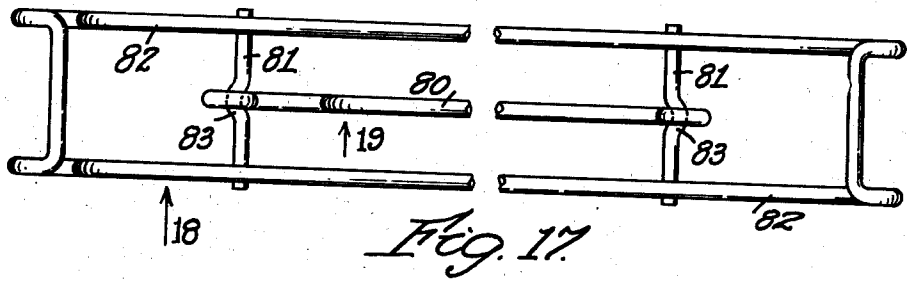


Fig. 17.

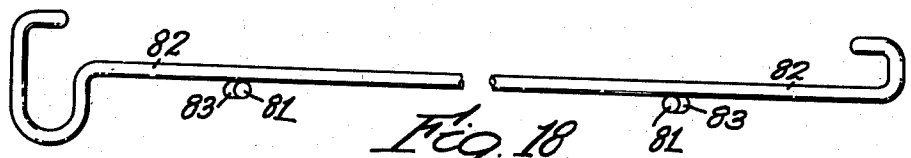


Fig. 18.

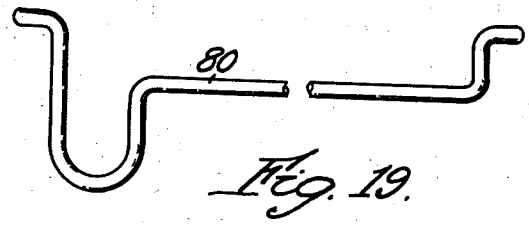


Fig. 19.

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UNITED STATES PATENT OFFICE

2,288,737

FOLDING TABLE

Parkhurst Page, Shrewsbury, Mass.

Application January 9, 1940, Serial No. 313,094

7 Claims. (Cl. 311—83)

This invention relates to folding card or cocktail tables and to other similar tables of relatively small size and light weight.

It is the general object of my present invention to provide a folding table having improved means to firmly support the table when in use, and conveniently foldable when the table is not in use.

A further object is to provide a table in which the unfolding movement of the supporting means is at least semi-automatic. I also provide an all-metal construction of supporting means, which may be easily and economically manufactured, and which is well adapted for production in quantity.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claims.

Two forms of my invention are shown in the drawings, in which

Fig. 1 is a front elevation of one form of my improved table;

Fig. 2 is an end view thereof, looking in the direction of the arrow 2 in Fig. 1;

Fig. 3 is a partial plan view thereof;

Fig. 4 is a partial sectional end elevation, taken along the line 4—4 in Fig. 3;

Fig. 5 is a view similar to Fig. 4 but showing the parts in folded position;

Fig. 6 is a partial plan view, looking in the direction of the arrow 6 in Fig. 4;

Fig. 7 is an exploded sectional view, taken along the line 7—7 in Fig. 6;

Fig. 8 is a partial bottom view of a transverse bar;

Fig. 9 is an enlarged detail view, looking in the direction of the arrow 9 in Fig. 1;

Fig. 10 is a sectional end elevation of a slightly modified construction;

Fig. 11 is a plan view of a modified transverse bar made of wire rod;

Fig. 12 is a side elevation, looking in the direction of the arrow 12 in Fig. 11;

Fig. 13 is a plan view of a modified keeper member made of wire rod;

Fig. 14 is a side elevation, looking in the direction of the arrow 14 in Fig. 13;

Fig. 15 is a partial side elevation showing the manner of assembling the wire bar and wire keeper member;

Fig. 16 is a partial sectional side elevation similar to Fig. 4 but showing an additional modified construction;

Fig. 17 is a partial plan view of the transverse bar of the second modification and shown in Fig. 16;

Fig. 18 is a partial side elevation, looking in the direction of the arrow 18 in Fig. 17; and

Fig. 19 is a partial side elevation of the keeper member shown in Fig. 16.

Referring to Figs. 1 to 9, my improved table comprises a top 20 and supporting means therefor comprising two rectangular frame members 21 and 22 having their side portions connected by pivot studs 23. The top 20 is preferably formed from a single piece of suitable sheet material, as fibre, composition, glass or metal. The frame members 21 and 22 are preferably made of drawn metal rod or tubing, with the ends welded, crimped or otherwise secured together to form continuous structures.

Transverse flat bars 30 underlie the top 20 and are provided with upwardly and inwardly curved end portions 31 which grip the edges of the top. If preferred, one or both ends of the transverse bars may be formed as shown in Fig. 10, where the bar 30^a is provided with a downwardly projecting loop 32 and with the free end thereof forming an offset flange or shoulder 33. This modified construction provides desired resilience to take care of slight variations in the width of the top 20^a.

A keeper plate 35 is provided for each transverse bar 30 or 30^a. The body portion of the plate 35 is spaced below the bar 30 sufficiently to provide a recess 36 for the horizontal top portions 37 and 38 of the frame members 21 and 22. The right-hand end of the plate 35 (as viewed in Fig. 4) is bent upward and outward to provide a flange 40, and the left-hand end is bent downward in the form of a loop 41 (Fig. 7) and then upward and outward to provide a flange 42.

Clips 44 are welded or otherwise secured to the lower surface of the bar 30 or 30^a and their inner ends are offset downward to provide pockets or recesses 43 to receive the end flanges 40 and 42 of the keeper plates 35 when the plates are snapped into place. The clips 44 are preferably somewhat wider than the transverse bars, and the inner free corners thereof are offset as indicated at 46 to prevent lateral displacement of the keeper plates 35.

The loop portions 41 of the keeper plates receive the horizontal top portions 37 and 38 of the frame members 21 and 22 when the table is folded, as shown in Fig. 5, and provide clearance between said top portions, so that fingers may not be pinched as the parts are folded.

The frame member 22 is provided with wire

loops 48, secured to the horizontal top portion 38 thereof and serving to prevent said top portion 38 from moving to the right (Fig. 4) with the portion 37 when the table is being opened. The loops 48 also prevent lateral shifting of the frame members 21 and 22 to the right or left relative to the bars 30 and top 20, as viewed in Fig. 1.

I also preferably provide a spring as 50 (Fig. 9), loosely supported on one of the pivot studs 23 and having its ends engaging the upper portions of the frame members 21 and 22. The action of the spring is to press the upper portions of the frame members apart automatically, or at least semi-automatically, when the table is being opened and set up for use. The addition of this spring 50 permits a waiter to easily open and set up a table with one hand, while holding a tray in his other hand.

With the construction described, I am able to use relatively light stock for the transverse bars 30 and keeper plates 35, as downward pressure on the table merely forces the end flanges 40 and 42 of the keeper plates more firmly into the pockets 43 formed by the clips 44. The clips 44 are firmly secured to the straight transverse bars 30, so that there is no resilient element between the clips 44 which can be made to yield by downward pressure on the table.

It will also be noted that all parts of my improved construction are of simple form and easily manufactured, so that the table is very economical to build.

In Figs. 11 to 15 I have shown a modified construction of transverse bar 60 and keeper member 61. The bar 60 is preferably formed of two bent wire end elements 62 and 63 having their inner ends joined by welding attachment to a rectangular wire frame 64. The ends of the elements 62 and 63 are bent upward and offset to provide portions to grip the edges of the table top and may be either in the simpler form shown at 65 or in the more resilient form shown at 66. Cross bars 67 are welded below the elements 62 and 63 for a purpose to be described.

The keeper members 61 are similarly formed of bent wire end elements 70 and 71, the element 70 having an upwardly and outwardly bent portion 72 and the element 71 having a downwardly looped and outwardly bent portion 73, these parts corresponding to the flanges 40 and 42 in the construction previously described. The elements 70 and 71 are secured together by welding to a rectangular ring 74 and are provided with cross bars 75.

These bars 60 and keeper members 61 are assembled as indicated in Fig. 15 by hooking the bent end portions 72 and 73 of each keeper member 61 over the cross rods 67 of the associated transverse bar 60. The table top 20 and the supporting frame members 21 and 22 will be the same as in the form previously described, and this form of my invention also possesses the advantages in use and manufacture which have been previously pointed out.

In the form of my invention shown in Figs. 16 to 19, the keeper member 80 is formed as a single continuous bent wire member, and the cross bars 81 of the associated wire transverse bar 82 are formed with offset curved portions 83 to receive the ends of the keeper member 80 and prevent lateral displacement thereof. This simpler keeper member involves no welding and may accordingly be formed of more resilient stock.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. A folding table comprising a substantially rigid one-piece top made of stiff sheet material, supporting bars engaging the under side of said top and embracing opposite edges thereof, a supporting structure for said table comprising two rectangular crossed frame members pivoted together near the centers of the sides thereof, and keeper members for the upper horizontal portions of said crossed frame members, each keeper member having its ends offset upwardly with respect to its middle portion and again bent outward and positioned above fixed portions of its associated supporting bar, and said keeper member being yieldingly retained in assembled relation with said bar by the inherent longitudinal resilience of said keeper member.

2. The combination in a folding table as set forth in claim 1, in which the keeper members are spaced from the supporting bars to provide transverse recesses for the upper portions of said crossed frame members, and in which a part of each keeper member adjacent one end thereof is additionally bent downward to provide a loop to receive the said upper portions of said cross frame members when the table is folded.

3. A folding table comprising a substantially rigid one-piece top made of sheet material, supporting bars engaging the under side of said top and embracing opposite edges thereof, clips secured to the underside of said bars to provide pockets opening towards each other, a supporting structure for said table comprising two rectangular crossed frame members pivoted together near the centers of the sides thereof, and keeper plates for the upper horizontal portions of said crossed frame members, each keeper plate having its ends offset upwardly with respect to its middle portion and again bent outward and said ends being inserted in the pockets of the associated supporting bar and being yieldingly retained therein by the inherent longitudinal resilience of said keeper plate.

4. The combination in a folding table as set forth in claim 3, in which the free corners of said clips are offset upward to form abutments and thus prevent lateral displacement of said keeper plates.

5. A folding table comprising a substantially rigid one-piece top made of stiff sheet material, supporting bars engaging the under side of said top and embracing opposite edges thereof, a supporting structure for said table comprising two rectangular crossed frame members pivoted together near the centers of the sides thereof, and keeper members for the upper horizontal portions of said crossed frame members, each keeper member having its ends offset upwardly with respect to its middle portion and again bent outward and said ends being detachably engaged above fixed portions of the associated supporting bar and being yieldlingly retained therein by the inherent longitudinal resilience of said keeper member, and said transverse bars and keeper members being formed entirely of wire rod.

6. The combination in a folding table as set forth in claim 5, in which the keeper member is a single elongated wire element, all parts of which are in a single plane.

7. A folding table comprising a substantially rigid one-piece top made of sheet material, supporting bars engaging the under side of said top

and embracing opposite edges thereof, a supporting structure for said table comprising two rectangular crossed frame members pivoted together near the centers of the sides thereof, and keeper members for the upper horizontal portions of said crossed frame members, each keeper member having its ends offset upwardly with respect to its middle portion and again bent outward and said ends being inserted between and above fixed portions of its associated supporting bar and being yieldingly retained therein by the inherent longitudinal resilience of said keeper member, and each transverse bar and keeper member comprising bent wire elements rigidly secured together in their middle portions.

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