March 24, 1959 A. H. KOLB 2,879,118

TWO-LEGGED FOLDING TABLE CONSTRUCTION

Filed July 22, 1957 2 Sheets-Sheet 1

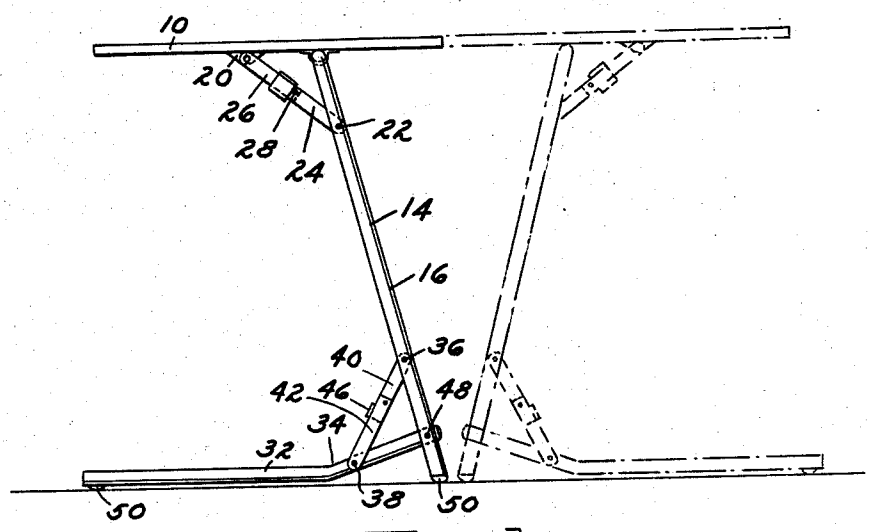


FIG. 1

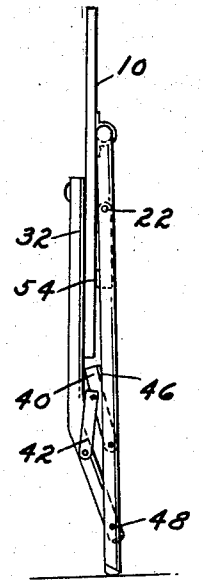


FIG. 3

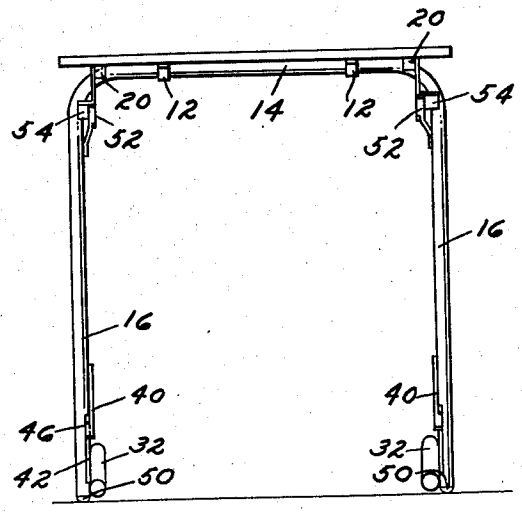


FIG. 2

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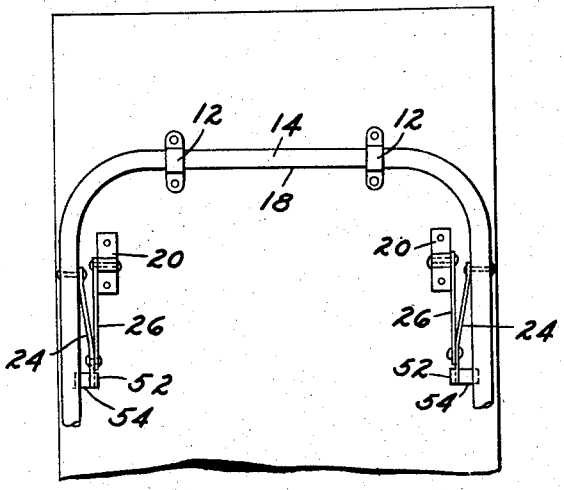
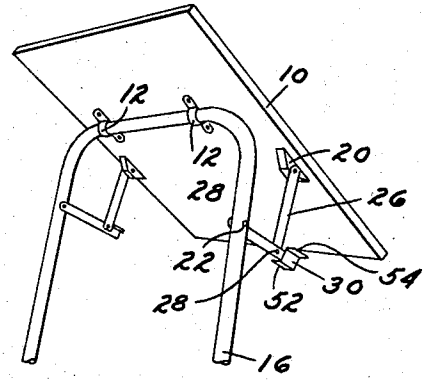


FIG. 4

FIG. 5



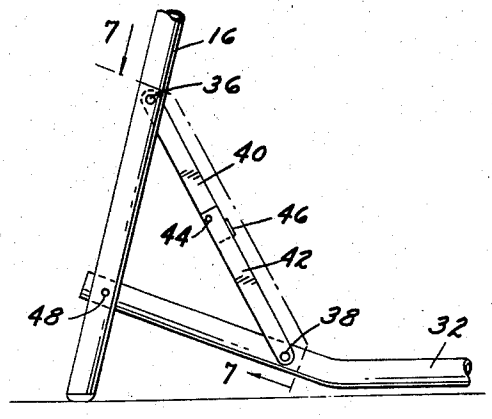
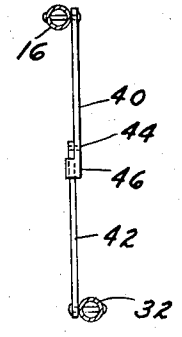


FIG. 6

FIG. 7



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United States Patent Office 2,879,118 Patented Mar. 24, 1959

2,879,118

TWO-LEGGED FOLDING TABLE CONSTRUCTION

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Application July 22, 1957, Serial No. 673,218

3 Claims. (Cl. 311—80)

This invention relates to folding tables and more particularly to a table of two-legged construction which may be used over the lap of a seated person to provide unobstructed space beneath the top and which may be readily folded into a compact unit for storage. Table constructions commonly used for lap tables resting on the floor are either of the non-folding type where substantial rigidity and load carrying capacity are required, or, if of the folding type, are deficient in rigidity and load capacity.

It is an object of the present invention to provide an improved folding two-legged table of simple and rugged construction which offers unobstructed leg room and which may be produced at low cost as well as with an attractive appearance.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawing wherein a preferred form of the present invention is illustrated.

In the drawings:

Fig. 1 is a side view of a table incorporating a preferred form of the present invention, showing by dotted lines a second table placed in abutting position thereto.

Fig. 2 is a rear view of the table shown in Fig. 1.

Fig. 3 is a side view of a table in folded position.

Fig. 4 is a fragmentary bottom view of the table in folded position.

Fig. 5 is a fragmentary perspective view of the table in partially folded position.

Fig. 6 is a fragmentary view of the foot and leg construction of the table, and

Fig. 7 is a view taken on line 7—7 of Fig. 6.

In the form of the invention illustrated in the drawing, the table comprises a unitary top plate 10 which may be constructed of any suitable material such as metal, plywood, plastic, etc. Secured to the bottom face of the top 10 by a pair of pivot brackets 12 is a unitary leg member 14. The member 14 comprises a single piece of material, preferably metal tubing, which is in the form of a U so as to provide the two downwardly extending leg portions 16 which are joined together by the connecting portion 18, forming a trunnion within the pivot brackets 12. The pivotal axis is preferably located between the fore-and-aft edges of the table top 10, a suitable position being approximately one-third of the way in from the rearward edge to the forward edge.

A locking means to position the leg member 14 and the top 10 in their position of use may be provided and preferably consists of a dislocatable strut extending between a pivot block 20 secured to the bottom of the top 10 and a pivot pin 22 on one of the legs 16. In the form shown, two such locking means are provided, each consisting of an over-center toggle linkage formed of a pair of links 24 and 26 which are pivoted together at 28. A stop bracket 30 of Z-shaped configuration, see Fig. 5, provides a limiting stop to hold the toggle rigidly in its position where the pivot 28 has just passed a

line connecting the pivots 20 and 22. The length of the dislocatable strut is preferably such that the leg member 14 is held in an off-perpendicular relation to the table top 10 and may be such that the lower ends of the legs 16 lie just inside the vertical projection of the top 10 upon the floor.

Pivoted to the lower portion of each leg 16 is a foot member 32 which is preferably formed of tubular metal. The foot member is bent as indicated at 34 for a purpose later to be described. A locking means is also provided to connect between pivot pins 36 and 38 on the leg and foot respectively, and may take the form of another over-center toggle mechanism comprising links 40 and 42 pivoted at 44 and held against over-travel by a stop member 46. The links 40 and 42 are pivoted with their opposite faces against their respective members 16 and 32 as shown in Figs. 2 and 7, thus permitting these members to be located side by side along the axis of their common pivots 48.

The over-center toggle mechanisms for locking the legs 16 and the foot members 32 in operative position are similar in their operation. Referring to Fig. 6, for example, it will be observed that in the locked position of foot member 32, the pivot 44 is located at one side of a line connecting pivots 36 and 38. If a force is exerted on the table in a direction tending to collapse legs 16 and foot member 32 in a direction toward each other, there is a tendency for pivot 44 to move in a direction toward pivot 48. However, this is prevented by the stop member 46. Thus, when in the operative position, the over-center toggle mechanism comprising links 40, 42 remains effectively locked until this toggle mechanism is manually jack-knifed to move pivot 44 to the opposite side of the line connecting pivots 36 and 38. Likewise, the pivots of links 24 and 26 are arranged such that the pivot 28 in the operative position lies at one side of the line connecting pivots 20, 22. If a downward force is applied to the table top 10, there is a tendency for links 24, 26 to jack-knife such that pivot 28 moves in a direction toward pivot brackets 12. Such movement, however, is prevented by the wing 52 of stop bracket 30. Stop bracket 30 is mounted on link 24 beyond pivot 28; and in the operative position, wing 52 engages the lower edge of link 26 to prevent the links 24, 26 from jack-knifing.

Stop bracket 30 is formed with a second wing 54. Wings 52 and 54 are located along opposite edges of link 24 and project in opposite directions. That is to say, wings 52 of the two dislocatable struts project inwardly toward each other while wings 54 project outwardly away from one another.

Suitable glide tips 50 may be provided at the ends of the legs 16 and feet 32. It is preferred that the length of feet 32 is such that the tips 50 will also lie just within the projected area of the table top 10 to provide as large a supporting base for the table as possible. At the same time, the edges of top 10 may be brought in contact with a similar table as illustrated in Fig. 1 to provide for making one large table area out of several small ones as may be desired.

In order to fold the table structure into a more compact form for storage or transportation, the dislocatable struts may be collapsed permitting the top 10 to be folded flat against the U-shaped leg member 14, where it lies against the bottom face of the table top. The foot portions 32 may be individually folded upwardly against the upper face of the top 10 as shown in Fig. 3 by collapsing the lower struts. It will be noted that the bend 34 in the foot 32 provides an offset which enables the major portions of feet 32 to lie flat and parallel against the surface of the table top, thus producing a compact package

which may be readily piled or stacked with other similar units.

Referring to Fig. 3, it will be observed that when the table is in the completely collapsed position, the links **24**, **26** are jack-knifed to a position where they are in overlying relation. Wing. **54** in this condition of links **24**, **26** engages legs **16** so that when table top **10** is swung upwardly to the operative position, movement of links **24**, **26** in the right direction is assured.

By reason of the unitary construction of the U-shaped leg member **14** and the location of the legs near the side edges of the top **10**, there is provided a clear space under the table which gives the advantage of unobstructed leg room. This makes the table convenient to use while seated in a chair and enables the top **10** to be comfortably positioned over the user's lap for such purposes as may be desired.

It will be observed that the inclination of legs **16** with respect to the plane of the table top **10** and the provision of the foot members **32** as illustrated produce a very stable structure. With this arrangement, the center of gravity of the table is located closer to the middle of legs **32** than would be the case if the legs **16** were perfectly upright and perpendicular to both the floor surface and table top **10**. Thus, the table is very stable and is not apt to tip readily.

While the form of embodiment of the invention as herein disclosed constitutes a preferred form, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow.

What is claimed is as follows:

1. A two-legged folding table comprising a generally rectangular table top having front, rear and side edges, a unitary U-shaped supporting member providing a pair of leg members connected by a bight portion, said table top being hinged on its underside to said bight portion along a line parallel to and spaced substantially rearwardly of the front edge of the table top, a pair of toggle members interconnecting each of said leg members with the table top, said toggle members being relatively short in length as compared with the length of said table between said hinge and said rear edge, said toggle members, when extended, locating the leg members in an operative position lying in a plane inclined slightly non-perpendicular to the plane of the table top, said toggle members being collapsible to permit swinging the rear edge of the table top downwardly and the front edge upwardly about the hinge axis to a position wherein the underside of the table is disposed directly adjacent the rear sides of the leg members and is substantially parallel thereto, a foot member pivotally connected to the lower end portion of each leg member on an axis extending generally parallel to the hinge axis of the table top, a pair of toggle members interconnecting each foot member with its respective leg such that when the last mentioned toggle members are extended, the foot members are pivoted to an operative floor engaging position extending rearwardly from the lower end portions of said leg members with the table top, in its operative position, generally parallel to the floor surface and the leg members inclined upwardly in a rearwardly direction, said last mentioned toggle members being relatively short as compared with the length of said foot members, the portion of the table top between the rear edge thereof and said hinge being less than the length of said leg members between said hinge and the points of connection between the second mentioned toggle members and the leg members, and a bend in each foot member which, in the operative position of the foot members, causes the portion of each foot member extending forwardly of the bend to incline upwardly and forwardly from the portion of the foot member rearwardly of the bend whereby the portion of each foot member extending rearwardly of the bend will in the folded position overlie said table top in a plane generally parallel thereto.

2. A two-legged folding table comprising a generally rectangular table top having front, rear and side edges, a unitary U-shaped supporting member providing a pair of leg members connected by a bight portion, said table top being hinged on its underside to said bight portion along a line parallel to and spaced substantially rearwardly of the front edge of the table top, a pair of toggle members interconnecting each of said leg members with the table top, said toggle members being relatively short in length as compared with the length of said table between said hinge and said rear edge, said toggle members, when extended, locating the leg members in an operative position lying in a plane inclined slightly non-perpendicular to the plane of the table top, said toggle members being collapsible to permit swinging the rear edge of the table top downwardly and the front edge upwardly about the hinge axis to a position wherein the underside of the table is disposed directly adjacent the rear sides of the leg members and is substantially parallel thereto, a foot member pivotally connected to the lower end portion of each leg member on an axis extending generally parallel to the hinge axis of the table top, a pair of toggle members interconnecting each foot member with its respective leg such that when the last mentioned toggle members are extended, the foot members are pivoted to an operative floor engaging position extending rearwardly from the lower end portions of said leg members with the table top, in its operative position, generally parallel to the floor surface and the leg members inclined upwardly in a rearwardly direction, said last mentioned toggle members being relatively short as compared with the length of said foot members, the portion of the table top between the rear edge thereof and said hinge being less than the length of said leg members between said hinge and the points of connection between the second mentioned toggle members and the leg members, and means enabling pivotal movement of the foot members from said operative position to a position wherein they are disposed directly adjacent the top side of the table top in said collapsed position and are generally parallel thereto, said first mentioned toggle members each comprising a pair of pivotally connected links, one link having its free end pivotally connected to the table and the other link having its free end pivotally connected to the adjacent leg member, one link of each toggle member having a laterally extending lug which, when the table top is in said collapsed position, overlies the adjacent leg member on the rear side thereof to prevent the toggle links from swinging forwardly past the adjacent leg member when the table top is swung upwardly towards the operative position about said hinge.

3. A two-legged folding table comprising a generally rectangular table top having front, rear and side edges, a unitary U-shaped supporting member providing a pair of leg members connected by a bight portion, said table top being hinged on its underside to said bight portion along a line parallel to and spaced substantially rearwardly of the front edge of the table top, a pair of toggle members interconnecting each of said leg members with the table top, said toggle members being relatively short in length as compared with the length of said table beween said hinge and said rear edge, said toggle members, when extended, locating the leg members in an operative position lying in a plane inclined slightly non-perpendicular to the plane of the table top, said toggle members being collapsible to permit swinging the rear edge of the table top downwardly and the front edge upwardly about the hinge axis to a position wherein the underside of the table is disposed directly adjacent the rear sides of the leg members and is substantially parallel thereto, a foot member pivotally connected to the lower end portion of each leg member on an axis extending generally parallel to the hinge axis of the table top, a pair of toggle members interconnecting each foot member with its respective leg such that when the last mentioned toggle members are extended, the foot members are pivoted to an operative floor

engaging position extending rearwardly from the lower end portions of said leg members with the table top, in its operative position, generally parallel to the floor surface and the leg members inclined upwardly in a rearwardly direction, said last mentioned toggle members being relatively short as compared with the length of said foot members, the portion of the table top between the rear edge thereof and said hinge being less than the length of said leg members between said hinge and the points of connection between the second mentioned toggle members and the leg members, and a bend in each foot member which, in the operative position of the foot members, causes the portion of each foot member extending forwardly of the bend to incline upwardly and forwardly from the portion of the foot member rearwardly of the bend whereby the portion of each foot member extending rearwardly of the bend will in the folded position overlie said table top in a plane generally parallel thereto, said first mentioned toggle members each comprising a pair of pivotally connected links, one link having its free end pivotally connected to the table and the other link

having its free end pivotally connected to the adjacent leg member, one link of each toggle member having a laterally extending lug which, when the table top is in said collapsed position, overlies the adjacent leg member on the rear side thereof to prevent the toggle links from swinging forwardly past the adjacent leg member when the table top is swung upwardly towards the operative position about said hinge.

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