Sept. 30, 1941. C. W. GAY 2,257,550

COLLAPSIBLE TABLE AND BENCH

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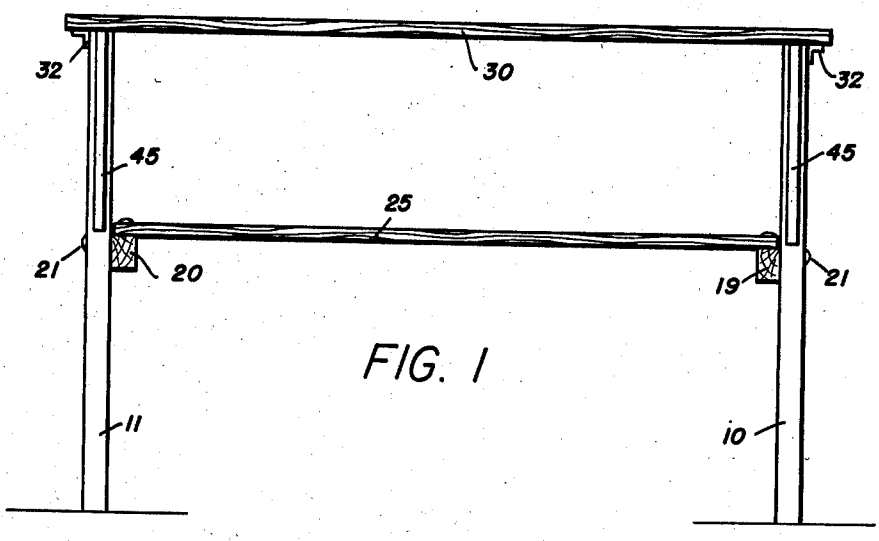


FIG. 1

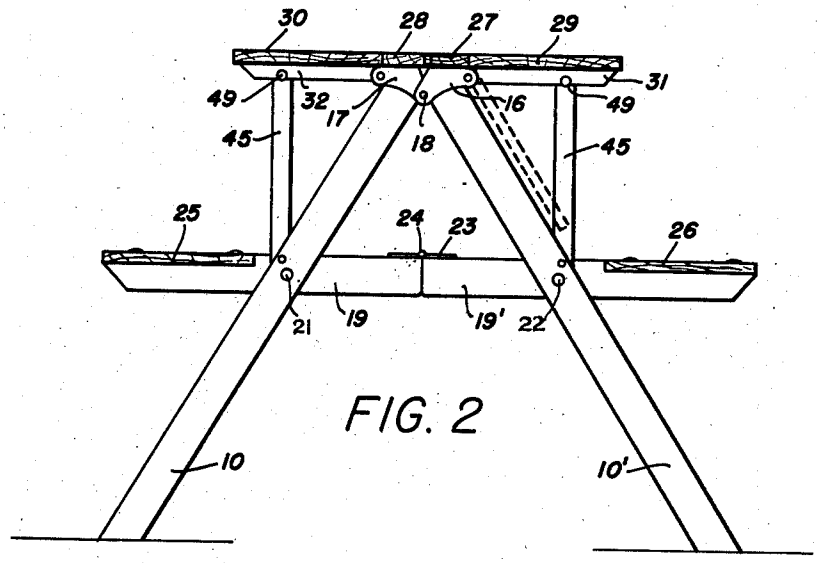


FIG. 2

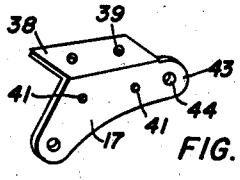


FIG. 10

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FIG. 3

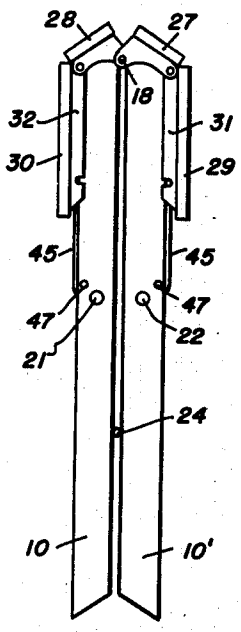


FIG. 4

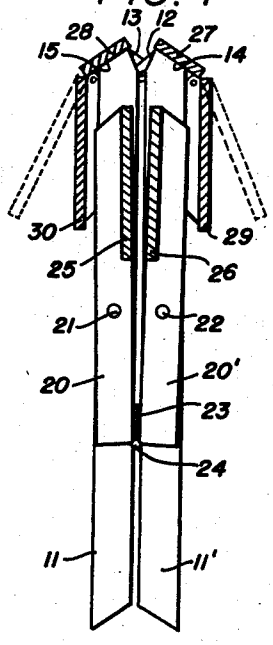
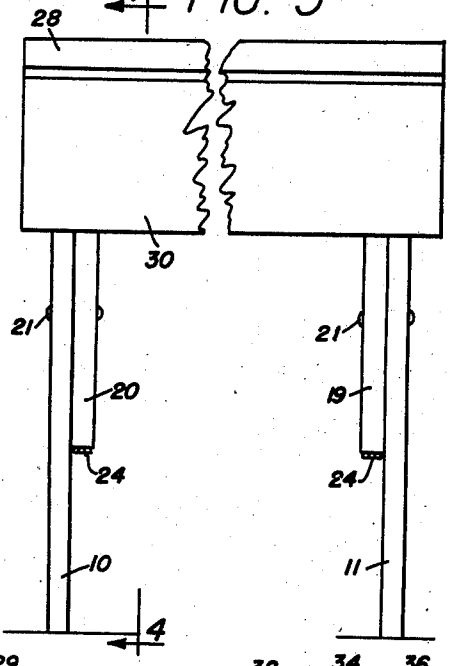


FIG. 5



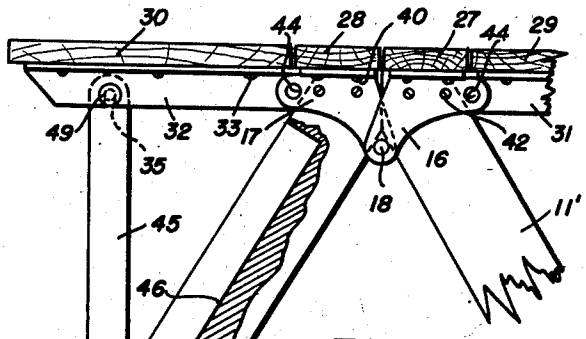


FIG. 6

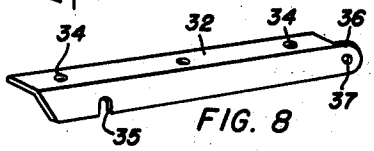


FIG. 8

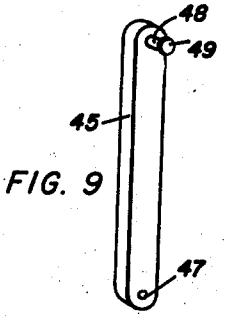


FIG. 9

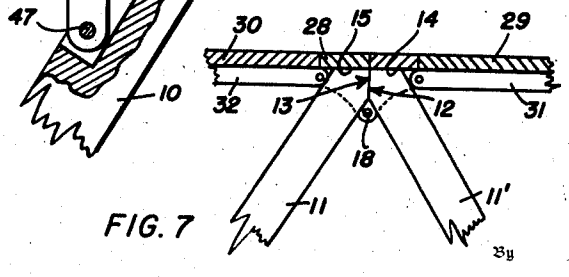


FIG. 7

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Patented Sept. 30, 1941

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COLLAPSIBLE TABLE AND BENCH

Carol W. Gay, Billings, Mont., assignor of one-half to Elliott F. Gay, Almota, Wash.

Application October 9, 1939, Serial No. 298,551

6 Claims. (Cl. 155—124)

My present invention relates to a collapsible table and bench which can be conveniently folded into a relatively small and very compact unit for storage or transportation purposes, but which may be simply opened out to the usable position without the use of tools or the necessity of adjusting or tightening any of the elements to each other.

An important object of this invention has been to provide an article having a foldable top suitably supported upon pivoted legs and having opposed benches pivoted therewith which, when the top is opened to the usable position, are also placed with proper relation thereto.

Another object of my invention has been to provide a collapsible table and bench which may be easily manufactured from wood or from metal, whichever medium is deemed most suitable.

A further object of the invention has been to provide a bench and table having simply operated and positive bracing and connecting devices for convenience in opening or collapsing the article.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the drawings, forming a part of this specification, and in which like numerals relate to like parts throughout the same,

Figure 1 is a view in side elevation of the collapsible table and bench of my invention in its usable position,

Figure 2 is an end elevational view of the device in usable position,

Figure 3 is an end elevational view of the device in the collapsed position,

Figure 4 is a sectional view taken on line 4—4 of Figure 5,

Figure 5 is a side view in elevation of the table as it appears when collapsed,

Figure 6 is an enlarged detail view illustrating the manner in which the legs are pivoted to each other and the top is supported thereon when in use,

Figure 7 is a view similar to Figure 6, but illustrating the inside face of the legs adjacent the pivot,

Figure 8 is a perspective view of one of the pivot cleats used in connection with my table,

Figure 9 is a perspective view of a portion of one of the brace legs, and

Figure 10 is a perspective view of the pivot flange used in connection with my invention.

As may best be seen in Figure 2, my table comprises two pairs of legs 10—10' and 11—11' pivoted to each other at their upper ends. For the purposes of this explanation I shall describe the table as though it were constructed of wood, but it is to be understood that in no way do I intend to limit myself to that material as there are a variety of other materials that lend themselves to the principles of my invention.

The upper ends of the legs 10 and 11 are cut as indicated in Figure 7 to form abutment faces 12 and 13 and table supporting faces 14 and 15. Pivot flanges 16 and 17 are secured to the legs 10 and 11, and the depending arms overlap to receive a pivot pin 18. Seat bars 19—19' and 20—20' are pivoted to the legs at 21 and 22 and are joined at their inner ends as shown in Figure 2 by means of a hinge 23 forming a pivot at 24. Upon the outer upper faces of the seat bars I secure seats 25 and 26.

The table top comprises a pair of relatively narrow leaf sections 27 and 28 secured to the upper faces 14 and 15 of the legs, and also a pair of relatively wider table leaves 29 and 30 which have on their under sides pivot cleats 31 and 32. These cleats may be secured in any suitable manner. I have indicated in Figure 6 that screws as 33 may pass through holes such as 34 in the upper face of the cleat and into the material of the table top. In the depending flange of the pivot cleat I form a notch 35, and on one end a pivot ear 36 drilled as at 37.

The pivot flanges 16 and 17, as may be best seen in Figure 10, comprise the attaching element 38 drilled at 39 for the reception of attaching screws 40 and also drilled at 41, through which holes, screws 42 pass to secure the flange to the leg. An ear 43 is also formed and has a pivot hole 44.

For supporting the table top sections 29 and 30 I use brace legs 45, which may be fitted into channels 46 of the legs 10 and 11 and which are pivoted at 47. The upper ends of the brace legs 45, as may be seen in Figure 9, support pins 48 which may have heads 49 and which engage in the notches 35 when the table is in its opened position.

When the table of my invention is in its collapsed form it appears from the end as shown in Figure 3 and from the side as shown in Figure 5. The table leaves 29 and 30 hang flat, parallel to the legs, and the brace legs 45 are disposed in the sockets 46.

To open the table to its usable position the leaves 29 and 30 and the attached pivot cleats 31 and 32, respectively, which are pivoted to the

pivot ears 43 of the flanges 17 and 17, are swung outwardly as indicated in dotted lines in Figure 4, and the upper edges of the seat leaves are grasped and the seat bars are caused to swing outwardly on the pivots 21 and 22 until they assume the position shown in Figure 2. As the seats are pivoted, the legs 10 and 11 are also spread until the abutment faces 12 and 13 contact each other, as well as the ends of the seat bars immediately below the pivot 24. In this way the structural frames at either end of the table are fully extended and the parts thereof held extended in such a manner as to prevent them from collapsing while the table is in use.

It is to be noted that the strips 27 and 28, which are angularly disposed with relation to the ground when the table is in the collapsed position (see Figures 3 and 4) have assumed a position horizontal with the ground when the frame is fully extended, and that their inner edges close against each other to present a smooth top. The table wing leaves are next swung upwardly on their pivots to the horizontal position and parallel to and in the plane of the members 27 and 28, and the brace leg 45 is brought into a substantially vertical position, at which point the pin 48 will fit into the groove 35 of the pivot cleat 31.

Heavy loads on the table leaves 27 and 28 are borne directly upon the legs 10 and 11, and loads upon the leaves 29 and 30 are principally borne by the brace legs 45 and thence by the legs 10 and 11.

The construction of a table according to the principles herein disclosed results in a rigid, highly useful structure which at the same time is relatively light in weight, simple in operation and inexpensive to manufacture.

To permit users of the table to recline and to support their backs, the brace legs 45 may be swung out of engagement with the notches 35 and one or both of the leaves dropped against the legs 10 and 11 as indicated in dotted lines in Figure 2. Under such circumstances the user of the table would sit with his back toward the leaves 29 or 30 and could lean backwardly for more comfort.

According to the example herein shown of one manner in which the principles of my invention may be practiced, the device is manufactured from standard sizes of material, and the hardware used is in large part formed from standard shapes, all of which contributes to the production of a device having a very low cost.

It is to be understood that the form of my invention, herewith shown and described, is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of my invention, or the scope of the subjoined claims.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A collapsible table and bench comprising two pairs of table legs, each pair pivoted together at their upper ends, two pairs of seat bars, each pair pivoted together and to a pair of legs, seat leaves each secured to one seat bar of each pair, a pair of fixed table leaf sections secured to the legs, a pair of wing leaf sections hingedly supported upon the legs, and brace legs between the table legs and the wing leaf sections.

2. A collapsible table and bench comprising two pairs of table legs, each pair pivoted together at their upper ends, abutment means on each leg to limit their travel upon opening movement, two pairs of seat bars, each pair pivoted together and to a pair of legs, seat leaves each secured to one seat bar of each pair, a pair of fixed table leaf sections secured to the legs, a pair of wing leaf sections hingedly supported upon the legs, and brace legs between the table legs and the wing leaf sections.

3. A collapsible table and bench comprising two pairs of table legs, each pair pivoted together at their upper ends, two pairs of seat bars, each pair pivoted together and to a pair of legs, seat leaves each secured to one seat bar of each pair, a pair of fixed table leaf sections secured to the legs, a pair of wing leaf sections hingedly supported upon the legs, and brace legs pivoted to the table legs and supporting the wing leaf table sections when the table is in its extended position.

4. A collapsible table and bench comprising two pairs of table legs, pivot flanges secured to the upper ends of the table legs having depending overlapping arms and pivot pins joining pairs of arms, two pairs of seat bars, each pair pivoted together and to a pair of legs, seat leaves each secured to one seat bar of each pair, a pair of fixed table leaf sections secured to the legs, a pair of wing leaf sections hingedly supported upon the legs, and brace legs between the table legs and the wing leaf sections.

5. A collapsible table and bench comprising two pairs of table legs, having pivot flanges secured to the upper ends of the table legs and pivot pins joining each pair of pivot flanges, two pairs of seat bars, each pair pivoted together and to a pair of legs, seat leaves each secured to one seat bar of each pair, a pair of fixed table leaf sections secured to the legs, a pivot cleat hingedly secured to each pivot flange, a pair of wing leaf sections secured to the pivot cleats, and brace legs between the table legs and the wing leaf sections.

6. A collapsible table and bench comprising two pairs of table legs, pivot flanges secured to the upper ends of the table legs having depending overlapping arms and pivot pins joining pairs of arms, two pairs of seat bars, each pair pivoted together and to a pair of legs, seat leaves each secured to one seat bar of each pair, a pair of fixed table leaf sections secured to the legs, a pivot cleat hingedly secured to each pivot flange and having a notch in the depending flanges of each cleat, a pair of wing leaf sections secured to the pivot cleats, and brace legs pivoted to the table legs and having means engageable in the notches of the pivot cleats when the wing leaf sections are in the extended positions.

CAROL W. GAY.