United States Patent

[11] **3,574,393**

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[54] **COLLAPSIBLE TABLE**
3 Claims, 5 Drawing Figs.

[52] **U.S. Cl.** **297/157,** 297/159, 108/35
[51] **Int. Cl.** **A47b 37/04**
[50] **Field of Search** 297/157, 158, 159; 108/127, 115, 36, 35, 34

[56] **References Cited**

UNITED STATES PATENTS

2,524,198	10/1950	La Rue	108/34X
2,565,032	8/1951	La Rue	108/34
2,670,031	2/1954	Melges	297/157X
2,811,197	10/1957	Nimmo	297/159
2,937,062	5/1960	Kruse	108/34

FOREIGN PATENTS

145,526	3/1952	Australia	297/157

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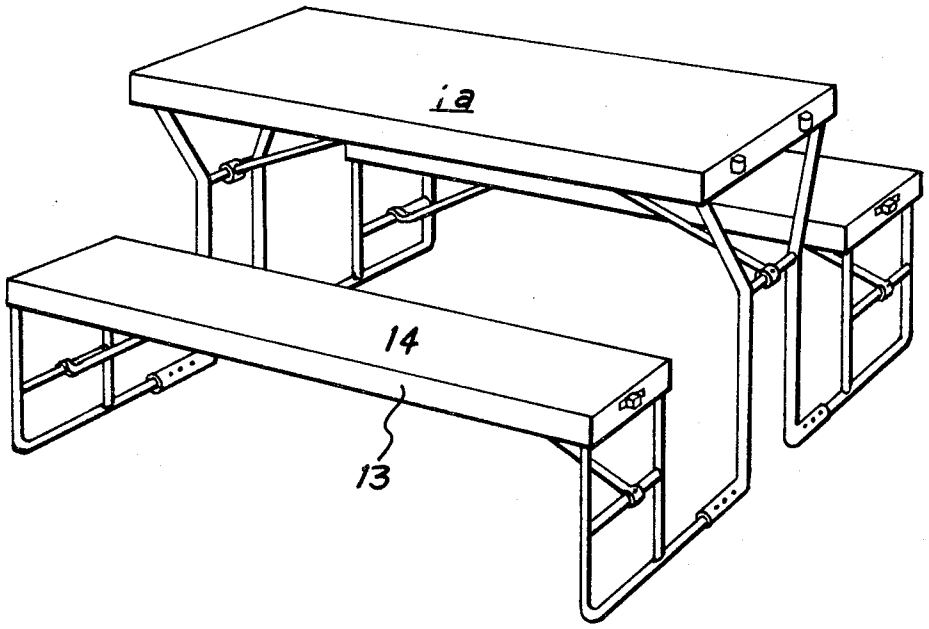
ABSTRACT: A collapsible, compact table with bench means releasably attached to the table legs where the benches and the table can be folded into a compact package for storage.



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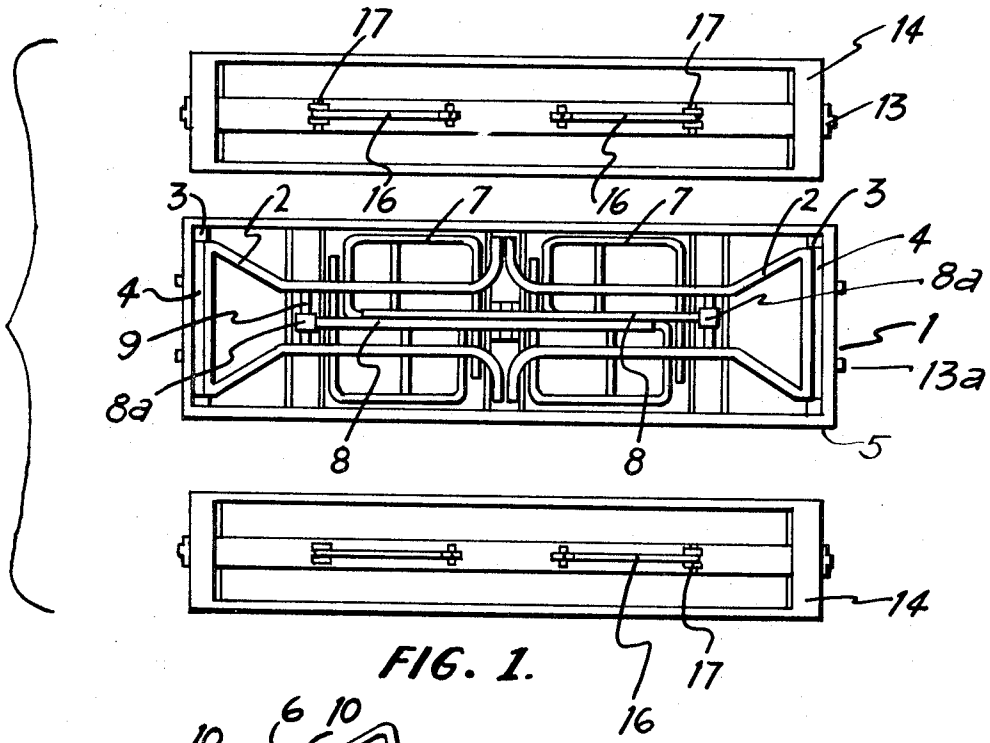

FIG. 1.

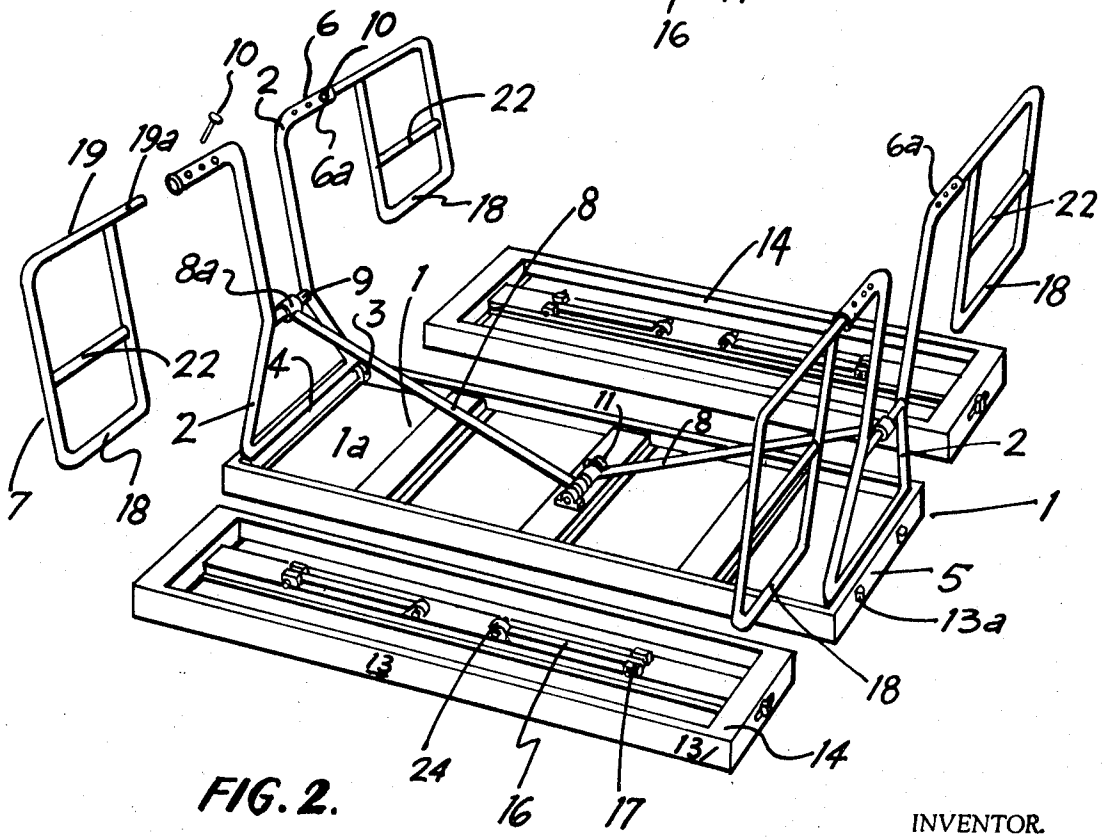

FIG. 2.

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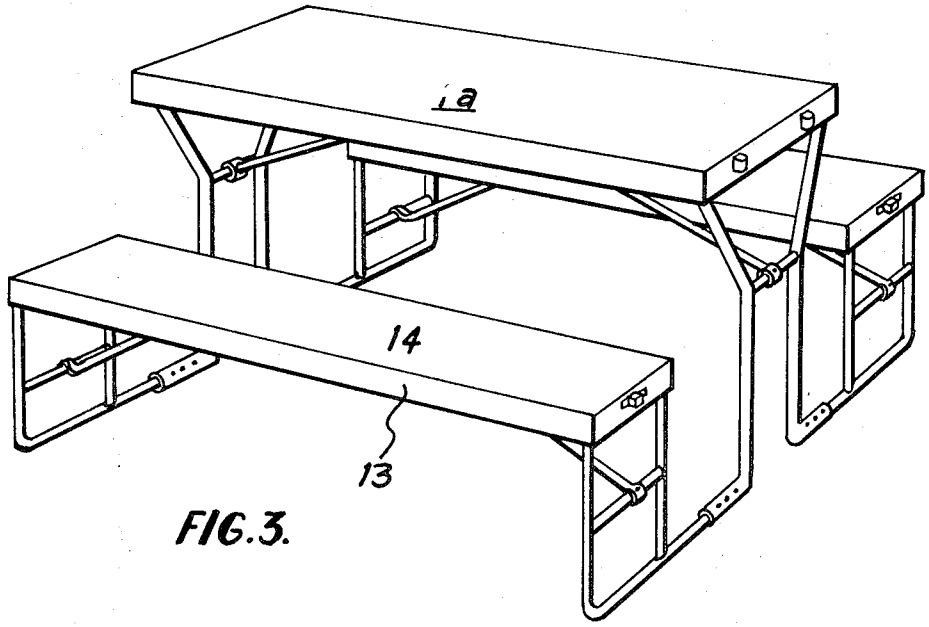

FIG. 3.

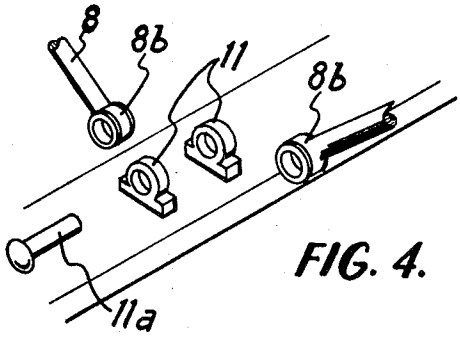

FIG. 4.

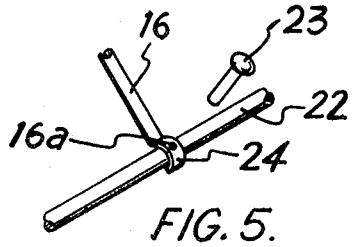

FIG. 5.

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COLLAPSIBLE TABLE

BACKGROUND OF THE INVENTION

Some previous tables have included attached bench means and some such tables have been adapted to be collapsed for storage or transportation. The collapsing mechanism provided by such previous arrangements has been complex and, in general, the benches have been shifted to planar relation with the top when the assembly is collapsed so that the overall width of the collapsed table and benches is equal to the combined width of the several elements. Such collapsed tables are difficult to handle because they are overly large and bulky.

Other arrangements have provided bench supports pivotably connected to the table leg, to be folded under the table, with the benches mounted on the pivotable supports.

SUMMARY OF THE INVENTION

It is recognized that the present invention advantageously provides an extremely sturdy, selectively collapsible table which is inexpensive to fabricate and can be folded into a narrow, compact arrangement to be easily moved from one location to another.

Moreover, it is recognized that the present invention provides a collapsible bench and table assembly where the bench means are attached to the underside of the table to form a compact package when the assembly is collapsed and the table can be used with or without the bench.

Furthermore, it is recognized that the present invention provides a collapsible table where the distance between the bench and the table can be selectively adjusted as desired.

More particularly, the present invention provides a collapsible table and bench assembly comprising: a table top with peripheral ledge means depending from one side thereof; leg means pivotably attached to the table top to be pivoted from a first position adjacent the table top and within the compartment formed by the ledge, to a second position extending generally outwardly from the table top; bench support means to be releasably stored within the peripheral ledge means; means to cooperatively attach the bench support means to selected table leg means when the leg means are in the second position; and, bench means to be attached to the bench support means and to be selectively fixed to the ledge means of the table top to cover the chamber formed by the ledge means when the table is folded for storage.

It is to be understood that the example of the present invention given hereinafter is not by way of limitation and that various changes can be made in the arrangement, form, or configuration of the apparatus disclosed without departing from the scope or spirit of the present invention.

Referring now to the drawings which show one example of the table in accordance with the present invention:

FIG. 1 shows a bottom exploded view of the table assembly with the bench means separated from the underside of the table;

FIG. 2 is a view of the underside of the table in partially erect position;

FIG. 3 shows the table fully erected;

FIG. 4 is a fragmentary view of a connector assembly which can be used in one arrangement in accordance with the present invention; and

FIG. 5 is a fragmentary view of another connector arrangement which can be used in one arrangement in accordance with the present invention.

A table in accordance with the example of the present invention, as shown in FIG. 1, includes a table top assembly 1 with benches 14 to be removably attached to the underside of the table top assembly for storage. Table top assembly 1 includes a top 1*a* with depending ledge means 5 extending from the edges of the table top 1*a* to form a compartment to contain the leg assemblies and bench supports as hereinafter described.

Leg assemblies 2 are pivotably connected to table top assembly 1 at opposite ends, within ledge 5, by means of rods 4 journaled in bearing means 3, as shown, so each leg assembly 2 can be pivoted from a first position as shown in FIG. 1 to a second outwardly extending position as shown in FIG. 2.

Brace means 8 are pivotably connected to crossmembers 9 of each leg assembly 2, for example by sleeve means 8*a* attached to the ends of brace means 8. As can be seen more fully in FIG. 4 braces 8 are releasably connected to a journal 11 connected to top assembly 1 by means of a pin 11*a* adapted to be inserted through cooperative end connectors in the end of braces 8 to fix leg assemblies 2 in outwardly extending relation.

Each leg assembly 2 of the example shown in the FIGS. includes out-turned sleeve sections 6, adapted to receive arms 19 of bench supports 7 as hereinafter described. Bench supports 7 are stored within the compartment defined by ledge 5 as shown in FIG. 1 and are released from stored position to be attached to leg assemblies 2. In accordance with one feature of the present invention each bench support 7 includes means to attach the support to leg 2, and in the example of the FIGS. each support 7 has an arm 19 which is cooperatively received by sleeve 6 of a leg assembly 2. Selectively spaced cooperative apertures 6*a* can be provided in sleeve 6 of each leg 2 and in arm 19 of each bench support 7 to receive pins 10 inserted through the apertures to fix the respective sleeve 6 and arm 19 together. The apertures are cooperatively spaced to provide a selected, adjustable, clearance between the bench and the table leg.

Each bench seat 14 can provide a depending ledge 13 to form a chamber to enclose bench brace means 16, when each brace 16 is joined to the bench assembly by means of a pivot 17.

As shown, a bench support 7 is provided at the ends of each bench 14. Each bench seat 14 can receive the upper end of a bench support 7 within the confines of depending ledge 13 and each support 16 can have an end 24 adapted to be joined to crossmember 22 of the adjacent bench support by means of a pin 23 inserted through apertures 16*a* in the end of each support 16, as shown.

Cooperative catch means 13—13*a* are provided for ledge 13 of each bench 14 and for ledge 5 of table assembly 1 to fasten benches 14 to ledge 5 to form a compact package when the table is collapsed. The width of each bench can advantageously be half the width of table top 1*a* so the benches, when fastened to the bottom of table assembly 1, completely cover the compartment formed by edges 5.

The FIGS. illustrate several steps in the erection of the table shown in accordance with one example of the present invention. As hereinbefore discussed, FIG. 1 is a view of the underside of table assembly 1 with benches 14 removed and bench supports 7 fastened in nesting relation in the compartment formed by ledge 5. Table legs 2 are in folded position to be fully received within the chamber defined by ledge 5.

FIG. 2 shows the table with legs 2 opened outwardly from top assembly 1 to be fixed in position by means of braces 8. With leg means 2 opened fully braces 8 are positioned so pin 11*a* can be inserted through journals 17 and apertures 8*a* of leg braces 8.

Bench supports 7 are removed from the bottom of table assembly 1 and arm 19 of each support is inserted in sleeve 6 provided by a leg assembly 2. Each bench support is secured in a selected position by pin 10 which is inserted in the cooperative apertures of each arm 19 and sleeve 6 as hereinbefore described. The table is then turned to upright position and it will be noted that the table rests on sleeves 6 and the bottom of bench supports 7.

Bench braces 16 are pivoted outwardly from the benches 14 and the benches are set on crossmember 18 of each bench assembly. Bench braces 16 are attached to crossmembers 22, for example by pins 23 inserted through apertures 16*a* as shown in FIG. 5.

The table is then completely assembled and ready for use. It will be understood that the table is collapsed by essentially the reverse of the procedure hereinbefore described.

I claim:

1. A collapsible table and bench assembly comprising: a table top with peripheral ledge means depending from one side thereof to define a storage compartment; leg means pivotably attached to said table top to be pivoted from a first position adjacent said top, and within said compartment, to a second position extending generally outwardly from said table top; bench support means to be releasably attached to said leg means; means to store said bench support means in said compartment; and, bench means to be attached to said bench support means and adapted to be fixed to the underside of said storage compartment to cover a portion of said compartment.

2. The apparatus of claim 1 wherein said leg means include outwardly extending sleeve means and said bench support means include arm means adapted to be cooperatively received by said sleeve means.

3. The apparatus of claim 1 including brace means connected to said table top and to said leg means.