June 14, 1966 J. GIAMBALVO 3,256,037

FOLDABLE PICNIC TABLE

Filed Dec. 1, 1964 2 Sheets-Sheet 1

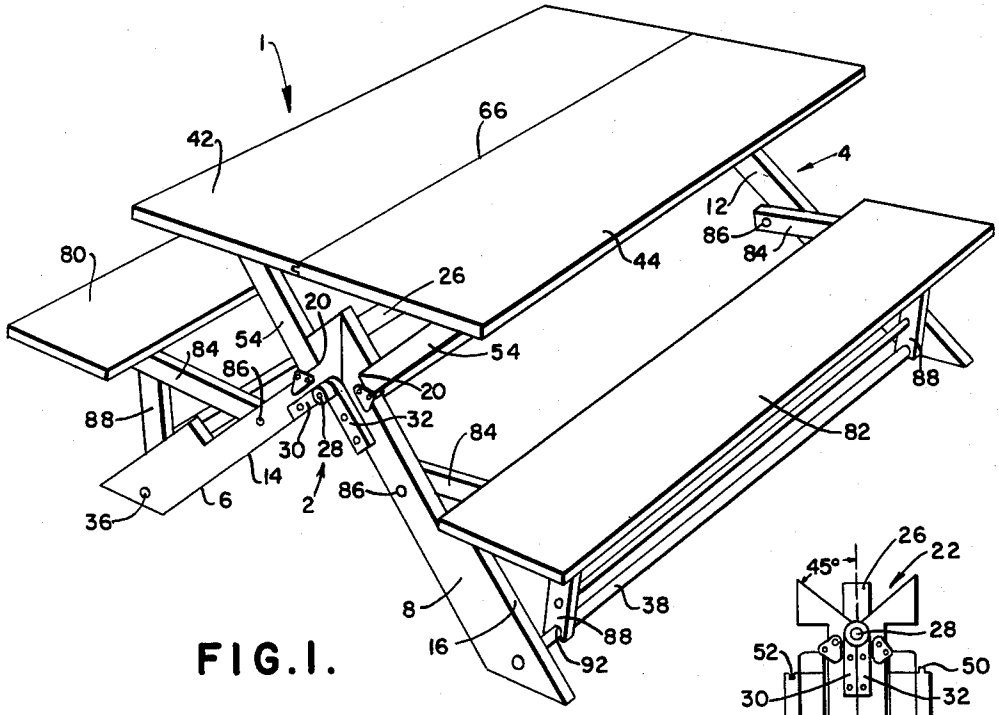

FIG. 1.

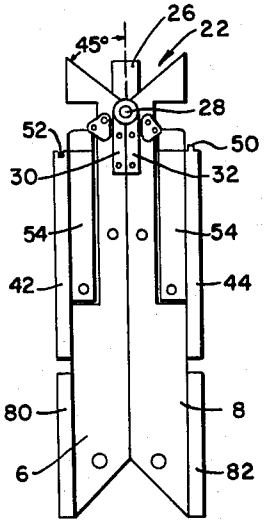

FIG. 3.

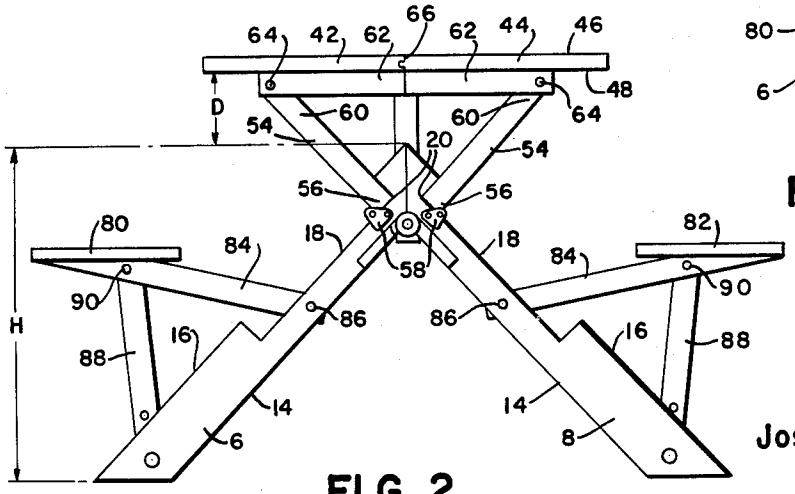

FIG. 2.

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FOLDABLE PICNIC TABLE

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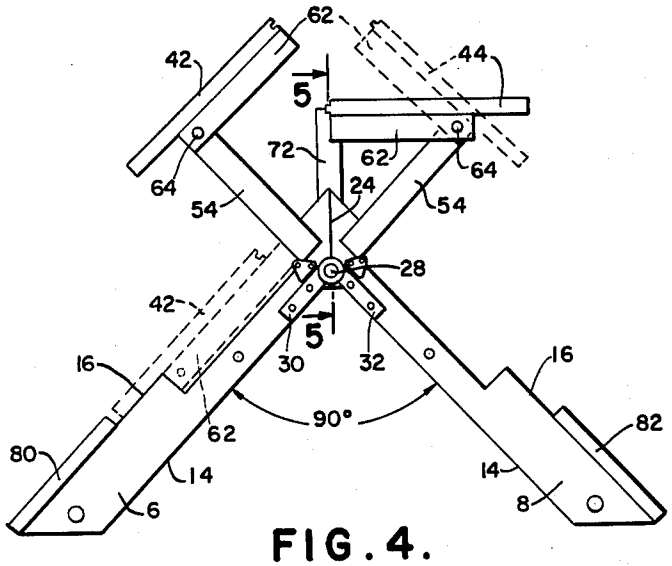

FIG. 4.

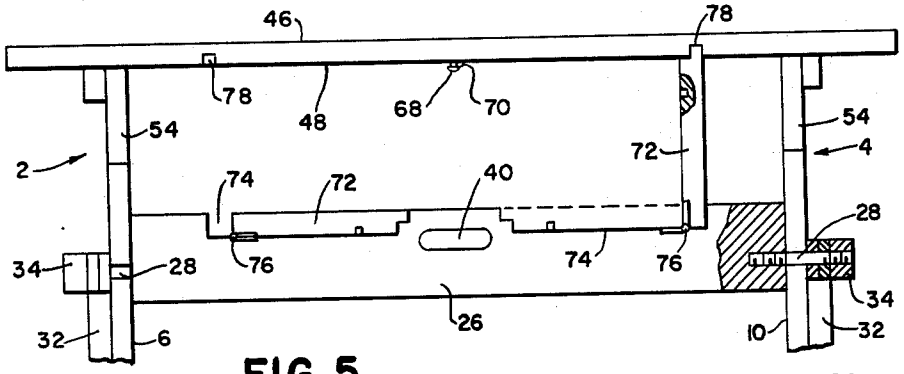

FIG. 5.

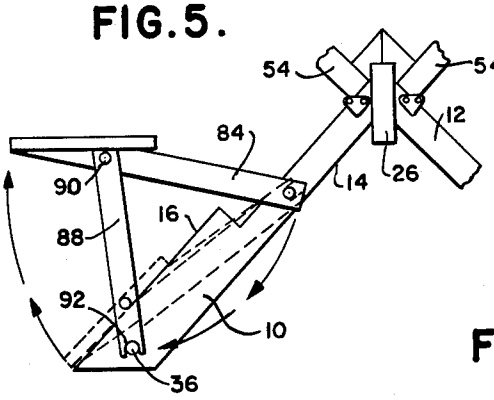

FIG. 6.

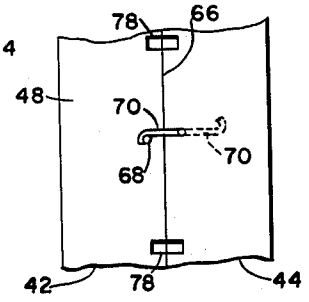

FIG. 7.

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FOLDABLE PICNIC TABLE

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6 Claims. (Cl. 297—159)

This invention relates generally to collapsible table and seat assemblies and more particularly to a unitary structure which can be conveniently folded into relatively small and very compact form for storage or transportation purposes and which may be readily unfolded into operational position without the need of tools, tightening or adjustments of any kind.

The improved construction of the present invention is essentially directed to the provision of a foldable table and seat apparatus wherein the pairs of foldable legs thereof are relatively short with respect to the substantial height assumed by the table surface when the table is in the opened operational position. The minimal leg length requirement of devices constructed according to the instant disclosure renders such devices extraordinarily practicable especially insofar as automobile luggage compartments can usually accommodate them with room to spare.

Accordingly and consonant with the foregoing, the primary object of this invention resides in the provision of a foldable picnic table which when in the unfolded operative position will be of conventional height and when folded will occupy an unexpectedly small amount of space relative to the operational size of the table.

Another object of the present invention is to provide a unitary device which affords free movement of associated elements from a folded to an unfolded operative position and which maintains such elements in erected position and permits ready movement of the elements into the folded storable position.

A further object of the instant invention resides in the provision of a foldable picnic table which includes novel support and brace elements and which, therefore, is exceptionally strong and lightweight in view thereof and still compactly foldable for storage and carrying purposes.

Another object of the present invention is to provide a device of the foregoing character which may be fabricated of wood, metal, or other suitable material.

Another general object of the present invention is to provide a foldable picnic table which will be simple in structure, economical of manufacture, easily and quickly erected and highly effective in use.

Other objects and advantages of the instant foldable picnic table will be set forth in part hereinafter and in part will be obvious herefrom, or may be learned by practice of the invention, the same being realized and attained by means of the structure defined and pointed out in the appended claims.

The accompanying drawings referred to herein and constituting a part hereof, illustrate one embodiment of the invention, and together with the description, serve to explain the principles of the invention.

FIGURE 1 is a perspective view of the instant picnic table in the unfolded operative position;

FIGURE 2 is an end elevational view of the unfolded table shown in FIGURE 1;

FIGURE 3 is an end elevational view of the picnic table in the folded inoperative position;

FIGURE 4 is an end view of the picnic table in the partially unfolded position;

FIGURE 5 is a fragmentary side elevational view of the present apparatus taken along line 5—5 of FIGURE 4, parts thereof being shown in cross-section;

FIGURE 6 is a fragmentary end elevational view of the device, a seat section thereof being shown in the folded and unfolded position; and

FIGURE 7 is a fragmentary view of the table leaf sections in edge abutting relation, the cleat and tie-bar being illustrated therein.

Referring now in detail to the present preferred embodiment of the invention illustrated in the accompanying drawings, FIGURE 1 shows the foldable picnic table designated generally by numeral **1** and shown therein in the unfolded operative position.

As more specifically disclosed in the drawings taken collectively, the table will be seen to comprise spaced pairs of legs **2** and **4**, legs **6**, **8** and **10**, **12** of each respective pair having inner edges **14** and outer edges **16**, said outer edges each having an elongate recess **18** of generally rectangular configuration whereby a square corner **20** is formed at the upper end of each said recess, the inner edges **14** of respective pairs of legs, e.g., **6**, **8** being mitered approximately 45° at the upper end **22** thereof as illustrated in detail in FIGURE 3. Thus, when in the unfolded position said legs will assume an approximately 90° angle as shown in FIGURE 4 by dint of the mutual abutment at **24** of the aforesaid 45° mitered inner edges **14**.

Main beam member **26** extends between said pairs of legs and is disposed between the upper ends thereof as shown in FIGURE 5 of the drawings. Said beam is connected at either end to respective pairs of legs by a pivot member **28**, hinge sections **30** and **32** being rotatable about said pivot member and each section is respectively secured to a respective leg as specifically shown in FIGURE 4. Nut **34** retains said legs and beam member in the pivotal arrangement shown and described. When the respective pairs of legs are folded whereby parallelism of said legs is effectuated as shown in FIGURE 3, hinge sections **30** and **32** similarly assume respectively parallel positions. Accordingly, it will be appreciated that said legs are movable between a folded position, wherein said legs are substantially parallel, and an unfolded position, wherein said legs are arranged at an approximately 90° angle.

In addition to the aforedescribed main beam member **26**, beams **36** and **38** are provided to rigidly connect the lower ends of opposed legs **6**, **10** and **8**, **12**, respectively, of said spaced pairs of tlegs **2** and **4**. Beam **36**, only an end of which is shown, is identical in kind and relative position to beam **38**, the latter being more clearly seen in FIGURE 1. Thus it will be understood that while beams **36** and **38** move with the pairs of legs as they are folded and unfolded, main beam **26** remains stationary with respect to said legs and remains centrally disposed intermediate said legs as shown in FIGURE 3 and opening **40** provided therein serves as a carrying handle to facilitate manual transportation of the device.

Table leaf sections **42** and **44** as shown, have upper and lower surfaces **46** and **48**, respectively, and a tongued longitudinal edge **50** and a grooved longitudinal edge **52**. Leaf support members **54** are each provided to occasion the support of said table leaf sections, an end **56** of each support member being pivotally connected to a leg with individual connector plates **58** being the pivotal connection therebetween. Such pivotal connections are, as shown, accomplished within the upper ends of said elongate recesses **18** and adjacent the square corners **20**, the other end **60** of each leaf support member being pivotally connected to the lower surface **48** a respective leaf section. As will be observed in FIGURES 2 and 4, e.g., brace members **62** are fixedly positioned with respect to said table leaf sections and support members **54** are connected to said leaf sections via said brace members, pins **64** providing the pivotal linkage therebetween. The aforesaid square corners **20** so provided at the upper end of said leg recesses, perform as stop means by functioning to restrain said leaf support members in perpendicular

relation with respect to the respective leg to which they are connected. As shown in the drawings, the leaf support members when arranged perpendicularly as described, extend substantially above the upper ends of said legs when the latter are in the unfolded 90° position. The table leaf sections being held above the upper ends of the legs, may be arranged in tongue-in-groove edge abutting relation as shown in FIGURES 1 and 2, parting line **66** lying centrally and longitudinally of the continuous table surface which is formed, said table surface being disposed in an horizontal plane spaced substantially above the upper ends of said legs. That is to say, the space D in the construction shown is equal to approximately one-third the height H of the unfolded legs. The import of the foregoing resides essentially in the provision of a construction whereby the height of table surface may be relatively high in comparison to the height of the unfolded legs and still render a relatively compact and short folded assembly. It will be understood that the magnitude of space D may vary depending upon the length of support members **54**, the length of the latter being limited by the length of the legs and the recess capable of being formed therein. As shown in FIGURE 7 of the drawings, cleat **68** and tie-bar **70** attached to the lower surfaces **48** of respective leaf sections, are mutually engageable to retain said leaf sections in edge abutting relation.

With reference now to FIGURES 4 and 5, upright members **72** will be observed, said members being pivotally connected to beam **26** within the spaced recesses similarly designated by numeral **74**, hinge elements **76** being thee pivoting instrumentalities. As shown, said upright members are movable between a vertical position wherein the free ends thereof are receivable within respective transverse notches **78** which extend across parting line **66** and thus provide support for said edge abutting leaf sections, and a folded position wherein they lie flush within said recesses **74** of said main beam.

With further reference to the drawings, the foldable picnic table will be seen to include a pair of seat sections **80** and **82**. When the seats are in the horizontal operative position illustrated in FIGURES 1 and 2, seat support members **84** partially support said seat sections, one end of each seat support member **84** being pivotally connected to a respective leg by a respective pin **86**, and the other end theerof being fixedly secured to a respective seat section as shown. As will be noted, the pivotal connections at pins **86** are provided intermediate the upper and lower ends of said legs, such arrangement thus enabling said seat sections to be folded coextensively with respect to the length of the legs as shown in FIGURE 6. Seat support members **88**, pivotally connected at one end by pin **90** to seat support members **84**, respectively, are removably securable upon a respective beam **36** and **38** at the other ends thereof by reason of the concavity **92** provided within said other ends. Accordingly, by dint of said supporting arrangement, members **84** and **88** cooperatively and fully support said seat sections in a plane substantially parallel with said table surface when said legs are in the unfolded position. Also, as shown in FIGURE 3, respective pairs of leaf and seat sections **42**, **80** and **44**, **82** are disposed in the same planes when said legs are in the folded position.

It will be appreciated that the angular relationships between the foldable elements of the foldable picnic table assembly may be varied and still provide an operative structure, the angular relationships herein described being preferred and exemplary.

The instant structure may, it will be understood, be constructed of any suitable materials such as wood, steel, aluminum, or plastic, lightness and durability factors being considerations in the choice of materials. Also, it will be obvious that the table may be used indoors and outdoors, and for purposes other than picnic occasions.

Although the preferred embodiment of the foldable picnic table has been described, it will be understood that within the purview of this invention various changes may be made in the forms, details, proportion and arrangement of parts, the combination thereof and mode of operation, which generally stated consists in a device capable of carrying out the objects set forth as disclosed and defined in the appended claims.

What is claimed is:

1. A foldable picnic table comprising two spaced pairs of legs, a first beam extending between said pairs of legs and disposed between the upper ends thereof, a pivot member provided at each end of said first beam member, each pair of legs being pivotally connected about a respective pivot member whereby said legs are movable between a folded position, wherein said legs are substantially parallel, and an unfolded position, wherein said legs are arranged at an angle, a pair of second beams, each of the latter rigidly connecting the lower ends of the opposed spaced legs of said pairs of legs, a pair of table leaf sections, each leaf section having upper and lower surfaces and longitudinal edges, a longitudinal edge of one leaf section being tongued and a longitudinal edge of the other being grooved, leaf support members adapted to support said table leaf sections, one end of each leaf support member being pivotally connected to the upper end of a respective leg, the other end of each leaf support member being pivotally connected to the lower surface of a leaf section, stop means provided adjacently the pivotal connection of each respective leaf support member and respective leg, said stop means being adapted to restrain said leaf support members in perpendicular relation with respect to respective legs, said leaf support members when so normally disposed being extended substantially above the upper ends of said legs when the latter are in the unfolded position whereby said table leaf sections when arranged in tongue-in-groove edge abutting relation form a continuous table surface lying in an horizontal plane substantially above the upper ends of said legs, a pair of seat sections, first seat support members adapted to partially support said seat sections, one end of each first seat support member being pivotally connected to a respective leg and intermediate the upper and lower ends thereof, the other end of each first seat support member being fixedly secured to a seat section, and second seat support members, one end of each being pivotally connected to a seat section and the other end of each being removably receivable upon a respective second beam to thus in coporation with a first seat support member fully support a respective seat section in a plane substantially parallel with said table surface when said legs are in the unfolded position.

2. A foldable picnic table comprising in combination, two spaced pairs of legs, each leg having inner and outer edges, the outer edge of each having an elongate recess provided therein a square corner being formed at the upper end of said recess, the inner edges of respective pairs of legs being mitered approximately 45° at the upper ends thereof, a first beam extending between said pairs of legs and disposed between the upper ends thereof, said first beam having a pair of recesses therein, a pivot member provided at each end of said first beam, each pair of legs being pivotally connected about a respective pivot member whereby said legs are movable between a folded position, wherein said legs are substantially parallel and an unfolded position, wherein said legs are arranged at an approximately 90° angle, a pair of second beams, each of the latter rigidly connecting the lower ends of the opposed legs of said spaced pairs of legs, a pair of table leaf sections, each leaf section having upper and lower surfaces and longitudinal edges, a longitudinal edge of one leaf section being tongued and a longitudinal edge of the other being grooved, leaf support members adapted to support said table leaf sections, one end of each leaf support member being pivotally connected to a respective leg within the upper end of the elongate

recess and adjacent the square corner formed at the upper end thereof, each leaf support member being foldable into a respective elongate recess, the other end of each leaf support member being pivotally connected to the lower surface of a leaf section, said square corner being adapted to restrain said leaf support members in perpendicular relation with respect to respective legs, said leaf support members when so normally disposed being extended substantially above the upper ends of said legs when the latter are in the unfolded 90° position whereby said table leaf sections when arranged in tongue-in-groove edge abutting relation form a continuous table surface lying in an horizontal plane substantially above the upper ends of said legs, a cleat and a tie-bar attached to the lower surfaces of respective leaf sections, said cleat and tie-bar being mutually engageable to retain said leaf sections in edge abutting relation, a pair of upright members pivotally connected to said first beam within said respective recesses thereof, said upright members being movable between a vertical position wherein they provide support for said edge abutting leaf sections, and a folded position wherein they lie flush within the recesses of said first beam, a pair of seat sections, first seat support members adapted to partially support said seat sections, one end of each first seat support member being pivotally connected to a respective leg and intermediate the upper and lower ends thereof, the other end of each first seat support member being fixedly secured to a seat section, and second seat support members, one end of each being pivotally connected to a first seat support member and the other end of each being removably receivable upon a respective second beam to thus, in cooperation with a first seat support member, fully support a respective seat section in a plane substantially parallel with said table surface when said legs are in the unfolded position, respective pairs of leaf and seat sections being disposed in the same planes when said legs are in the folded position.

3. A foldable picnic table comprising in combination, two spaced pairs of legs, a beam extending between said pairs of legs and disposed between the upper ends thereof, a pivot member provided at each end of said beam, each pair of legs being pivotally connected about a respective pivot member whereby said legs are movable between a folded position wherein said legs are substantially parallel, and an unfolded position wherein said legs are arranged at an angle, a pair of table leaf sections, leaf support members adapted to support said table leaf sections, one end of each leaf support member being pivotally connected to a respective leg, the other end of each leaf support member being pivotally connected to a respective leaf section, said leaf support members being positionable to extend substantially above the upper ends of said legs when the latter are in the unfolded position, said leaf support members when so extended being adapted to support said leaf sections in edge abutting relation to form a continuous table surface lying in an horizontal plane substantially above the upper ends of said legs, a pair of seat sections, and movable support means adapted to support said respective seat sections in a plane substantially parallel with said table surface and to permit said seat sections to fold parallel with said legs.

4. A foldable picnic table comprising in combination, two spaced pairs of legs, a beam extending between said pairs of legs and disposed between the upper ends thereof, each pair of legs being pivotally connected to a respective end of said beam whereby said legs are movable between a folded position wherein said legs are substantially parallel, and an unfolded position wherein said legs are arranged at an angle, a pair of table leaf sections, leaf support members adapted to support said table leaf sections, said leaf support members being positionable at right angles with respective legs to extend substantially above the upper ends of the legs when the latter are in the unfolded position and to support said leaf sections in edge abutting relation to form a continuous table surface lying in an horizontal plane substantially above the upper ends of said legs, a pair of seat sections, and movable support means adapted to support said respective seat sections in a plane substantially parallel with said table surface.

5. A foldable picnic table comprising in combination, two spaced pairs of legs, a pair of table leaf sections and a pair of seat sections, said legs being movable between a folded position wherein said legs are substantially parallel, and an unfolded position wherein said legs are arranged at an angle, leaf section support means for supporting said leaf sections in an horizontal plane substantially above the upper ends of said legs a distance of approximately one-third the height of the legs when the latter are in the unfolded position, seat support means for supporting said seat sections in planes substantially parallel with respect to said horizontally supported leaf sections, said leaf and seat sections being foldable into parallelism with respect to respective legs when the latter are in either the folded or unfolded position.

6. A foldable picnic table comprising in combination, two spaced pairs of legs, a pair of table leaf sections and a pair of seat sections, said legs being movable between a folded position wherein said legs are substantially parallel, and an unfolded position wherein said legs are arranged at an angle, leaf section support means for supporting said leaf sections above the legs a distance approximately equal to one-third the height of the legs when the latter are in the unfolded position, seat support means, said leaf and seat sections being foldable into parallelism with respect to the respective legs when the latter are in either the folded or the unfolded position.

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