Oct. 26, 1948. R. WELLS 2,452,169

FOLDING PICNIC TABLE

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Fig. 1.

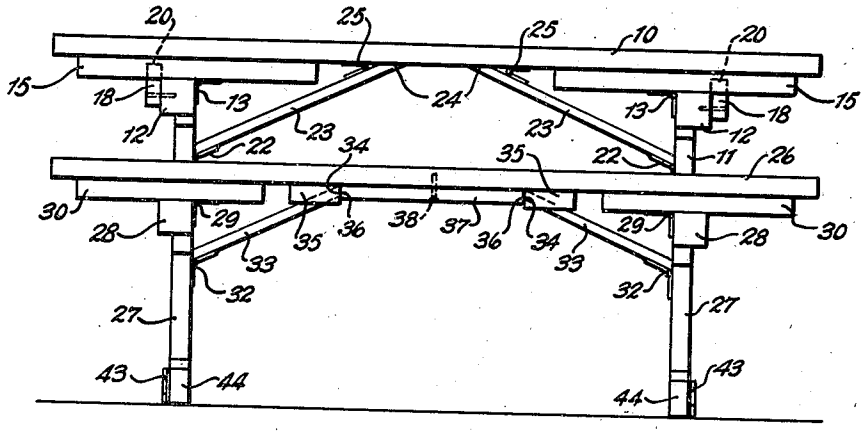
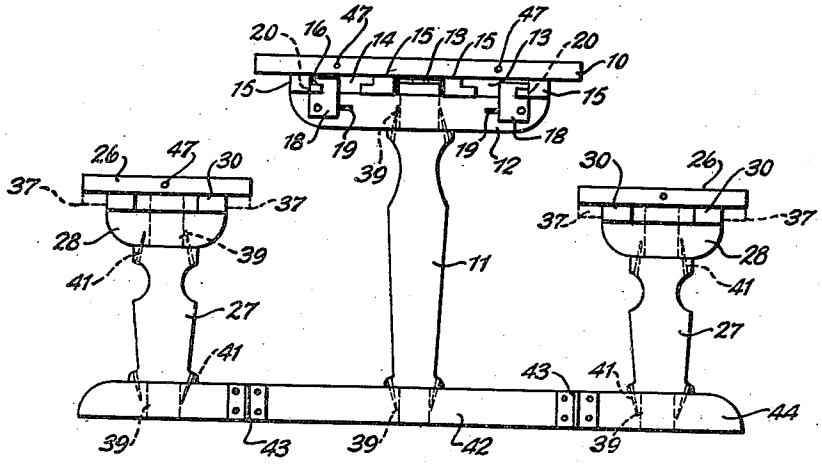


Fig. 2.



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Fig. 3.

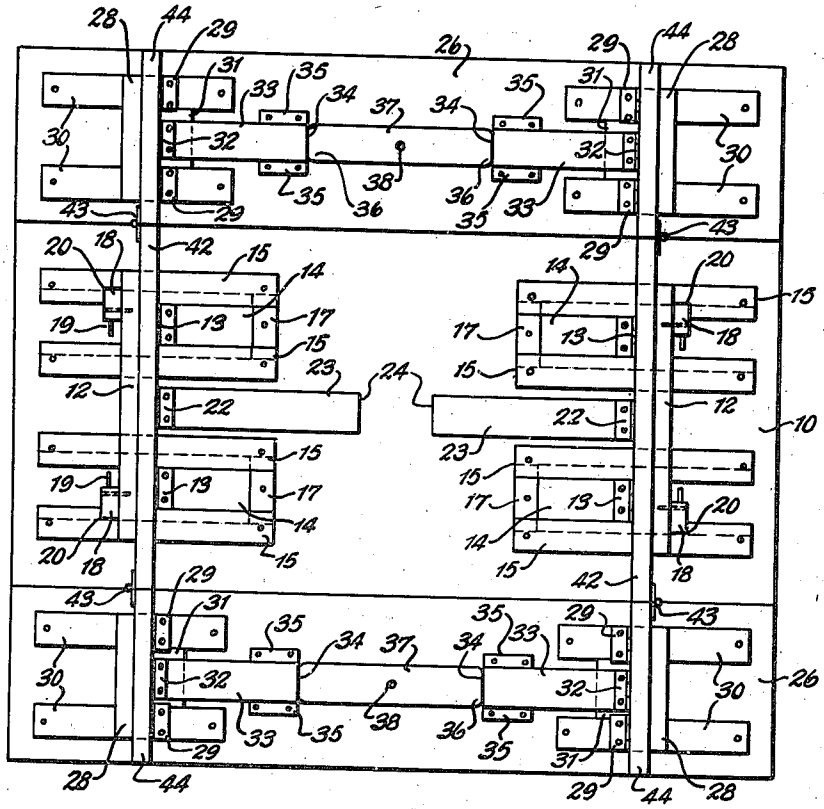
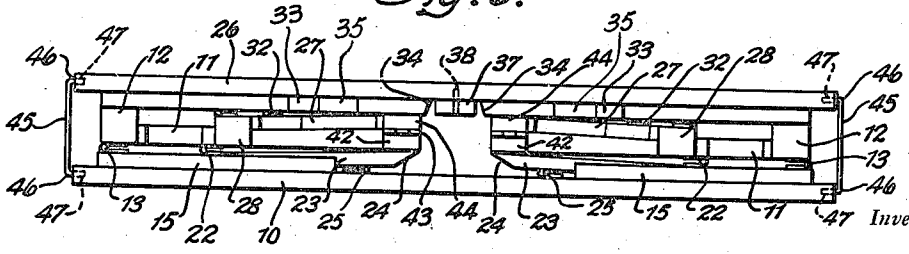


Fig. 6.



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FOLDING PICNIC TABLE

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Fig. 4.

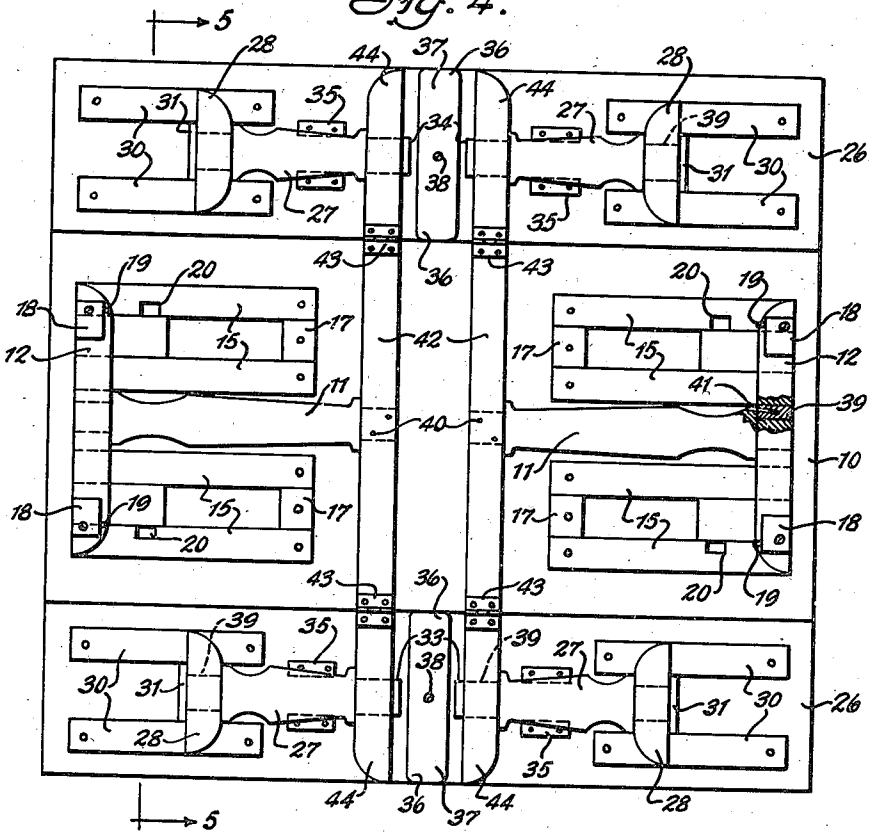
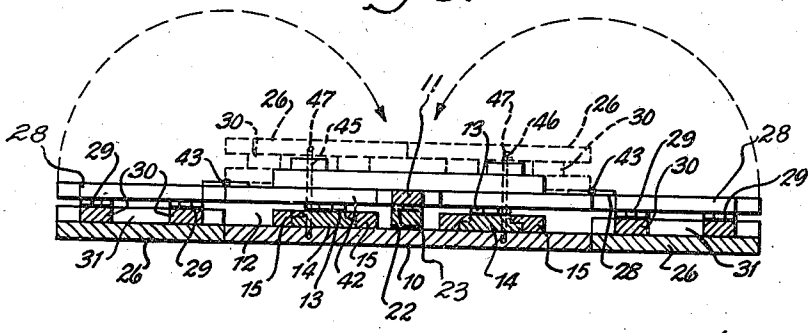


Fig. 5.



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FOLDING PICNIC TABLE

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Application September 26, 1946, Serial No. 699,538

6 Claims. (Cl. 155—123)

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This invention relates to a folding picnic table, including in a single foldable assembly a table and seats or benches on opposite sides thereof, adapted to be compactly folded for storage, transportation or shipment, and to be readily extended for use in the form of a rigid structure embodying all the elements of three separate pieces customarily employed, including the table and seats upon opposite long sides thereof in the form of benches.

An object of the invention is to provide a novel and simple arrangement by which the supporting legs for the table and the supporting legs for the seats or benches are foldable simultaneously to a collapsed position in compact form, and then the seats or benches are foldable under the table top, so as to form a foldable structure having opposite flat sides of relatively thin dimensions, retaining the folding parts therein and readily connected, so as to maintain its folded position or condition, so as to be readily moved to the desired location for setting the same up for use.

Another object of the invention is to provide separable seats or benches and table top having foldable legs and supporting structures in which the legs of the table are slidable when extended with the legs of the seats, so as to dispose the same in alignment for forming a rigid supporting structure for the table top and seats and in proper relation, with the seats or benches located at opposite sides of the table top in planes below the latter for seating persons at opposite sides of the table and capable of being readily held firmly in upright positions to form a rigid structure when set up, but adapted to be easily and quickly folded into compact relation when desired and when not in use.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevation of a foldable picnic table and seats or benches set up for use.

Figure 2 is an end elevation of the device in extended position for use.

Figure 3 is a bottom plan view of the table and seats in extended positions as shown in Figures 1 and 2.

Figure 4 is a view similar to Figure 3 showing the parts with the legs collapsed and the table top and seats in a single plane prior to folding.

Figure 5 is a sectional view taken on the line

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5—5 of Figure 4 and showing in dotted lines, the seats folded over on the top and supporting legs thereof in inverted position, and

Figure 6 is a side elevation of the device in folded condition.

Referring to the drawings in detail, in which like reference characters designate corresponding parts throughout the several views, the table top 10 is provided with foldable legs 11, of which two are provided morticed or otherwise secured rigidly to the central portions of transversely arranged bars 12 of rectangular cross-section slidably mounted beneath the table top 10, which is also of elongated rectangular form. The legs 11 are set toward the inner edges of the transverse bars 12 which are of square cross-section or thicker than the legs and hinged at spaced points near their ends as at 13 to slidable blocks 14 forming slides rabbeted at their side edges to engage similarly rabbeted bars or tracks 15 arranged in spaced parallel pairs of forming guide-ways, the rabbeted portions of which underlie the rabbeted portions of the slides 14 in reverse arrangement as shown at 16 and retain the legs and bars 12 in slidable connection with the table top 10 for movement in and out longitudinally thereof, limited at their inner ends by transverse stop members 17 which like the guide strips 15 are suitably secured to the bottom of the table top. The slides 14 are at the outer ends of the guide-ways when the legs 11 are folded against the underside of the top 10, but when extended to positions perpendicular to the table top, that is upright for supporting the same, the slides 14 are disposed against the transverse end pieces or stop members 17, and are retained in this position by providing the bars 12 near the ends thereof with eccentrically pivoted keepers or blocks 18 having pins 19 for turning them to enter notches 20 at the inner edges of the guide strips 15 outwardly of their intermediate points, to hold the legs erect in supporting position. The legs 11 which are preferably shaped as shown, to provide clearance at the sides, are transversely hinged or pivoted as indicated at 22 near the upper ends and adjacent reduced or recessed portions of the legs 11 to brace strips 23 having bevelled ends 24 to fit against the bottom surface of the table top 10 and hinged thereto as indicated at 25 to brace the legs in upright supporting positions. The elongated rectangular seats or benches 26, are flat strips of rectangular form narrower than or but half the width of the table top 10 are adapted to move into the same plane with the table top when arranged for folding and into planes below the same,

for seating the occupants of the table in the manner shown in Figures 3, 4 and 5, and 1 and 2 of the drawings, respectively. These seats **26** which are as long as the table top, are supported by similar formed legs **27** compared to the table legs **11** but shorter, though similarly shaped and recessed at the sides and fixed to transverse top members or bars **28** by mortise and tenon joints or otherwise, the same as the legs **11** are fastened to the cross-bars **12**, and extending across the seats **26**, that is at the inner sides of the bars **30** which are of square cross-section or rectangular and wider and thicker than the thickness of the legs **27**. While this construction with respect to the cross-members **12** and **28** relative to the legs **11** and **27** respectively, is preferred, and has advantages which will be hereinafter pointed out, the construction thereof is optional. The cross-bars **28** are pivoted or hinged adjacent the ends thereof and on their inner sides, as indicated at **29**, that is at spaced points, to spaced parallel longitudinal strips **30** and transverse strips **31** therebetween, suitably secured to the bottom of the seat strips or boards **26**. These structures are located at opposite ends of the seats **26**, the same as the hinge connections are located at opposite ends of the table top **10** and also hinged to the legs **27** in spaced relation to their upper ends as at **32**, are brace strips or bars **33** corresponding to the braces **23** but shorter and having oppositely bevelled or tapered ends **34** disposed to lie in vertical planes when the legs are upright and the braces diagonally disposed in outwardly inclined positions as more particularly shown in Figure 1 of the drawings, when the device is erected. These ends are designed to operate between spaced guide strips **35** secured to the bottom of the seat **26** spaced apart upon opposite sides of the longitudinal and transverse centers thereof, to be engaged by the rounded ends **36** of pivoted keeper bars **37** intermediately pivoted as at **38** to the bottom of the seats **26**, for positioning transversely of the seats when the device is folded and longitudinally thereof to engage the inner ends of the braces **33** when the device is erected, to serve as stops bracing the legs in upright positions together with the braces **33**, the same as the stops or transverse members **17** and the hinges **25** limit the movement of the legs **11** and braces **23** to set up positions. Also, if desired, the legs **11** and **27** may be fastened to the cross-bars **12** and **28**, in addition to the mortice and tenon connections or irrespective thereof, as indicated at **39**, by cross-pins **40** and/or dowel pins, preferably tapered as at **41**, as shown or otherwise. Of course, the cross members may be formed integral with the legs if desired.

In order that the entire table may be connected in a single foldable structure, the legs are hingedly connected, consisting of intermediate floor or ground engaging base bars **42** similarly secured to the lower ends of the legs **11** of the table intermediate their ends and having their outer ends pivoted or hinged as at **43** to the inner ends of transverse base members **44** similarly secured to the lower ends of the legs **27** so as to fold inwardly under or over the table top, depending upon whether the latter is disposed uppermost or as more convenient and preferred, lowermost in the folding position, as shown by the arcs and arrows in Figure 5 of the drawings. It should be noted that the hinges **43** are disposed at the outer faces of the hinged sections or base bars **42** and **44** so as to be disposed away from the undersurfaces of the table top **10** and seats **26** when folded thereagainst with the legs, thereby permitting the same to swing in opposite directions or arcs inwardly over and against the legs, cross-bars and intermediate sections **42** at the sections **44**, when the device is folded into compact form, so as to present the seat **26** and the table top **10** at opposite sides of the folded structure whereby the legs and intermediate folding structures are disposed to lie therebetween, thereby presenting flat surfaces upon opposite sides when the structure is folded. When the device is in folded condition, as shown in Figures 5 and 6 of the drawings, the inner edges of the seats **26** will come together in alignment and the outer edges thereof will align with the outer edges or long sides of the table top **10** and they may be held in this relation in any suitable manner, as by means of U-shaped pins **45** having bent ends **46** engaging sockets **47** in the ends of the seat **26** intermediately of the width thereof, and at spaced points of the width of the table top **10** in alignment therewith in parallel relation. This holds the structure compactly folded and against separation.

Assuming that the structure is folded in the manner shown in Figures 5 and 6 of the drawings, the retainers or connecting members **45** are disengaged and in order to set up the table in the manner shown in Figures 1 and 2 of the drawings, the seats **26** are swung outwardly in the opposite direction of the arrows in Figure 5 from the dotted line position, to the solid line position shown therein and also disclosed in Figure 4 with the legs and connections thereof lying flat against the bottom surfaces of the table top **10** and seats **26**. In this position, the slides **14** will be at the outer ends of the guideways or grooves between the guide strips **15** outwardly in opposite directions at opposite ends of the table and table top **10**, and due to the legs **27** being shorter than the legs **11** and the legs being connected at their inner or lower ends by the base pieces **42** and **44**, the latter will move into spaced parallel relation as shown in Figure 4 upon opposite sides of the pivoted bars **37** which are arranged transversely of the seats, the sliding outwardly of the slides **14** and cross-bars **12** permitting the upper ends of the legs to move outwardly and compensate for the difference in length of the legs. The legs are then moved to upright erecting positions to set up the table and seats by swinging the same upwardly and outwardly perpendicular to the table top and seats, thereby lowering the seats with respect to the table, considered in the set-up position or in the inverted folded position, raising the seats in spaced parallel relation to the table top in a common plane with each other and in spaced parallel relation insofar as the plane thereof is consigned relative to the plane of the table top. This disposes the seats below the table top, and of course, the folding may be accomplished in the reverse action or the extension of the table and seats or benches may be accomplished by downward swinging while supporting the table top in an elevated position, or the reverse of that described. When thus erected, the keepers **18** are swung on their pivots to engage the recesses or notches **20** and retain the legs upright. This is furthered by swinging the bars or keepers **37** to the position shown in Figure 3 of the drawings, to engage the ends of the braces **33** between the guides **35**, so that the legs **11** of the table and also the legs **27** of the seats, are effectively braced in this position to form a rigid sustaining structure. The fact that the legs **27** of the seats are shorter

than the legs 11, will result in dropping of the seats 26 in proper relation upon opposite sides of the longitudinal edges of the table top, in conjunction with the shorter braces 33 of the seats with respect to the braces 23 of the table top and the rigid spacing means 37 provided between the braces 33 of the seats. In other words, the sliding connections of the legs or supporting structures of the table compensate for the differences in lengths of the legs so that the lower connected ends of the latter are always in the same plane and move in the same radius or arc or substantially so, to maintain the structure intact. In folding, the parts 18 and 37 are merely moved to the opposite or disengaged positions, when the latter can swing in, to dispose the hinges 43 in alignment with the abutting or co-acting outer edges of the table top 10 and the inner edges of the seats 26 so that the latter can swing inwardly over and against the intermediate folded structure of the table top 10, in the manner shown in Figures 5 and 6 of the drawings, compactly folded to occupy a minimum of space for storage, transportation or shipment, or tying the same on the runningboard or in the trunk-rack of a car or rear compartment thereof, depending upon the length of the table. The fasteners 45 are then inserted in position in the sockets 47 to connect the table top and seats and secure them in folded relation. Attention is also directed to the fact that by reason of the cross-bars 12 and 28 being wider or thicker than the legs 27, these cross-bars will serve as contact members when the parts are folded as shown in Figures 5 and 6, to maintain said parts in tight connection or engagement, instead of permitting the folded structure or legs to be shifted between the table top and seats when the device is folded. This end is also facilitated by contact of the seats with the pivoted blocks or keepers 18 secured to the outer faces of the cross-bars 12 so that when the legs 11 are swung inwardly against the bottom surface of the table top, they will accommodate the thickness of the strips 30 and lie therebetween in contact with the undersurfaces of the seats 26 when folded. Thus, movement of the pivoted leg structures will be prevented when the device is folded.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

I claim:

1. A folding table of the class described, comprising a table top, legs foldably connected thereto, a pair of seats, legs foldably connected to the seats, connections between the legs at opposite portions of the table top and seats and means slidably connecting the first legs to the table.

2. A folding table of the class described, comprising a table top, legs foldably connected thereto, a pair of seats, legs foldably connected to the seats, connections between the legs at opposite ends of the table top and seats, said legs being foldable inwardly with their bottom surfaces disposed toward each other, means on the first mentioned legs slidably connected on the table top whereby said legs may move outwardly when the same are folded inwardly, and means to hold said parts in folded relation.

3. A folding table of the class described, comprising a table top, legs foldably connected thereto, a pair of seats, legs foldably connected to the seats, connections between the legs at opposite ends of the table top and seats, said legs being foldable inwardly with their bottom surfaces disposed toward each other, means on the first mentioned legs slidably connected on the table top whereby said legs may move outwardly when the same are folded inwardly, means at the slidable connections of the first legs to hold the same inwardly from the ends of the table top in upright supporting positions, and means to hold the legs of the seats in similar positions.

4. A folding table of the class described, comprising a table top, legs foldably connected thereto, a pair of seats, legs foldably connected to the seats, connections between the legs at opposite portions of the table top and seats adapted to permit folding of the seats and legs thereof over the table top and its overlying folded legs to present flat surfaces on the outside at opposite sides of the folded structure, and releasable means to maintain the legs in supporting positions.

5. A combination foldable picnic table and seats, comprising a table top, guides upon opposite ends of the bottom thereof, legs having cross-bars having means slidably engaging said guides, means cooperating between the guides and the cross-bars to maintain the legs in upright supporting positions, braces between the legs and the bottom of the table top, seats, legs hinged thereto, braces hinged to the seat legs and slidable at their inner ends, means carried by the bottom surfaces of the seats to engage said ends and hold the seat legs in supporting positions, and hinged connections between the lower ends of the legs permitting the seats and their folded legs to be folded over the table top and its overlying folded legs.

6. A combination foldable picnic table and seats, comprising a table top, guides upon opposite ends of the bottom thereof, legs having cross-bars having means slidably engaging said guides, means cooperating between the guides and the cross-bars to maintain the legs in upright supporting positions, braces between the legs and the bottom of the table top, seats, legs hinged thereto, braces hinged to the seat legs and slidable at their inner ends, means carried by the bottom surfaces of the seats to engage said ends and hold the seat legs in supporting positions, base sections on said legs pivotally connected in line with the side edges of the table top and inner edges of the seats and simultaneously swingable inwardly in the same arc with the legs of the table top moving outwardly in the guides, the pivotal connection of the base section permitting the seats and their folded legs to be folded over the table top and its overlying legs, and means to connect the table top and seats in folded relation.

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