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FOLDABLE BENCH

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2 Sheets-Sheet 1

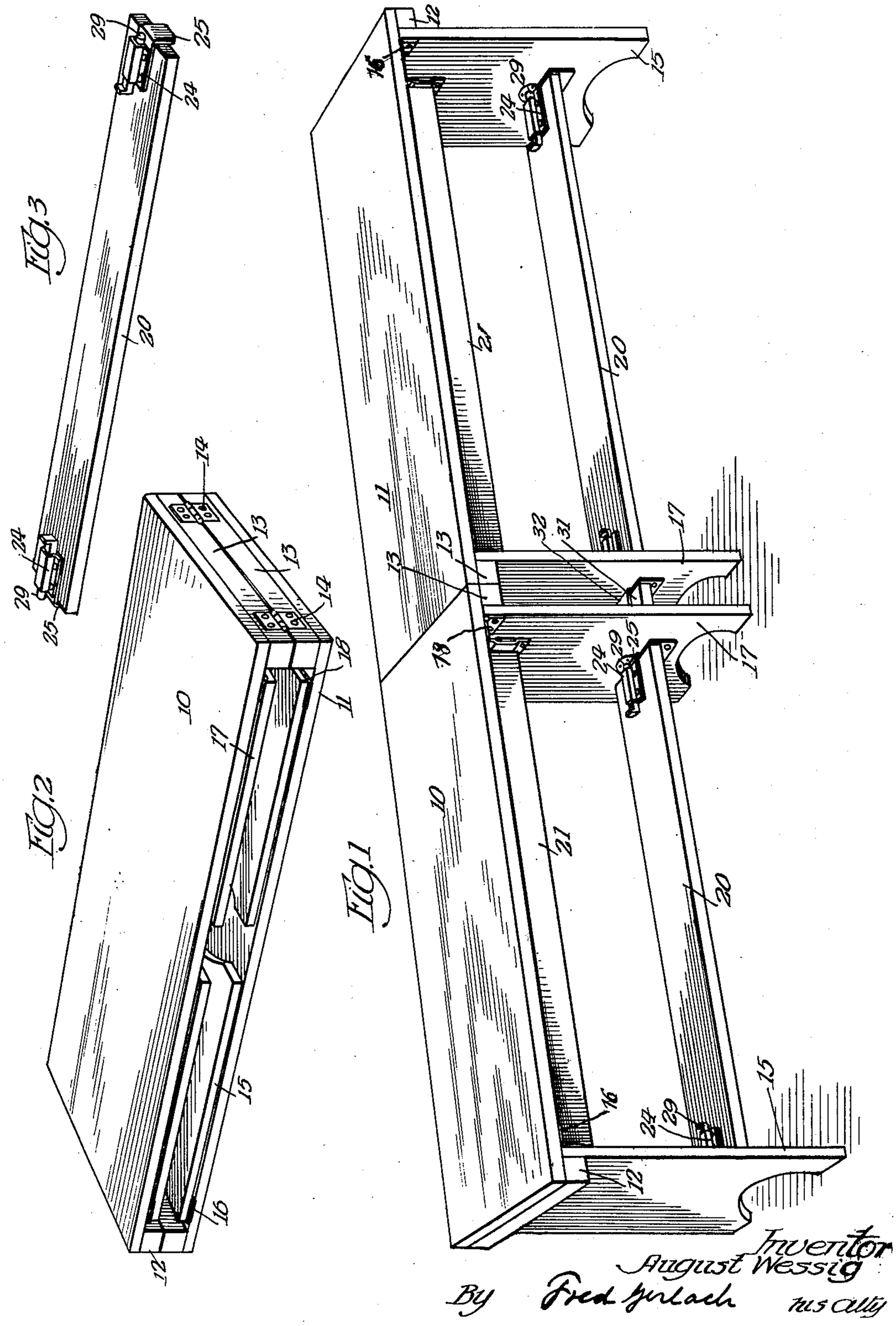

FIG. 3

FIG. 2

FIG. 1

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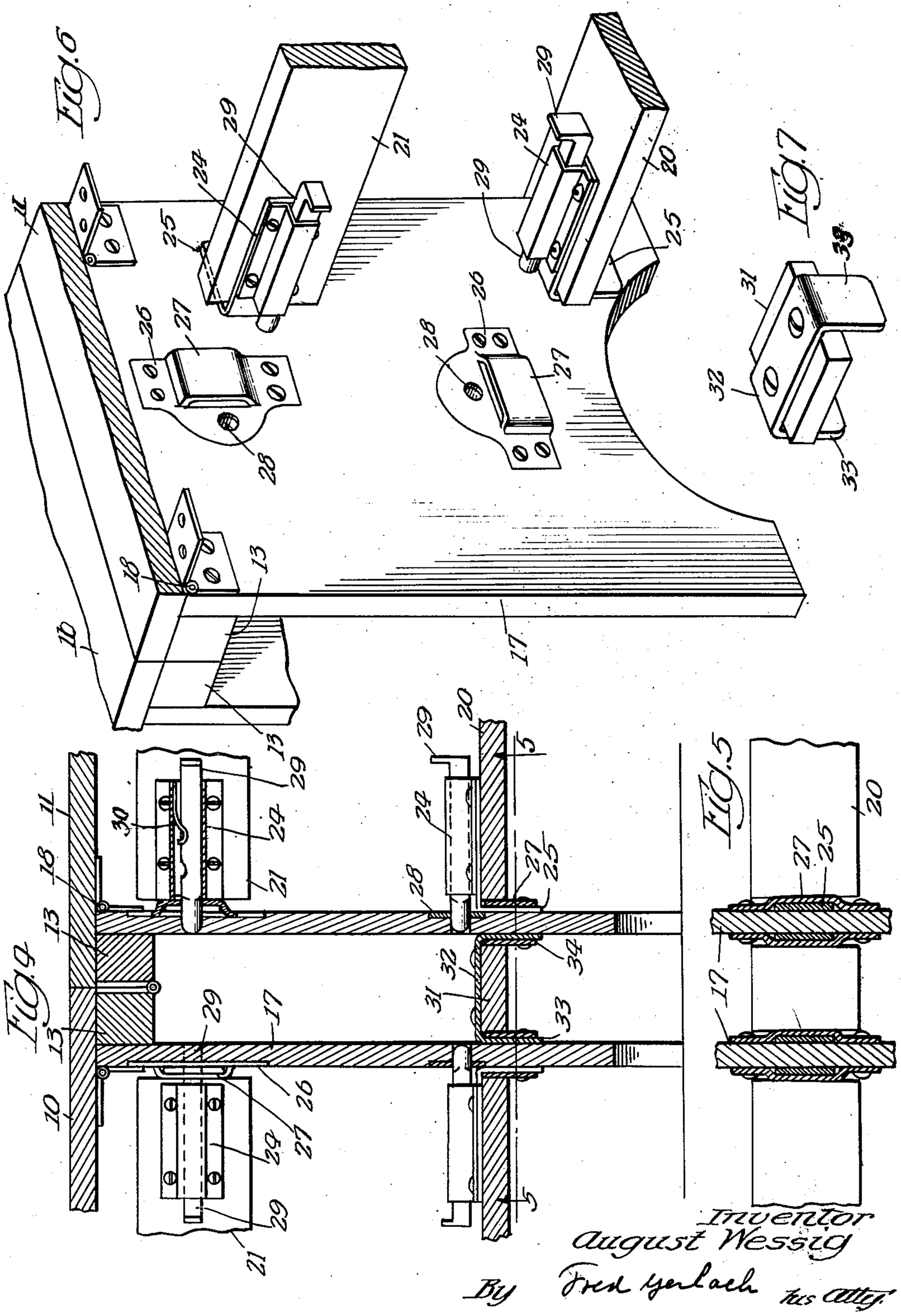

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FOLDABLE BENCH

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3 Claims. (Cl. 155—151)

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The invention relates to foldable benches.

One object of the invention is to provide a bench which has considerable seating capacity, for example: for seating six to eight persons, and comprises seat sections in endwise relation which are foldable together for storage.

Another object of the invention is to provide a foldable bench which comprises seat sections in endwise relation and foldable together, legs and devices for locking the legs to securely support the seat sections when they are unfolded.

Another part of the invention is to provide a foldable bench which is simple in construction, can be purchased at a low cost and is foldable into small compass for storage.

Other objects of the invention will appear from the detailed description.

The invention consists in the several novel features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a perspective of a foldable bench embodying the invention.

Fig. 2 is a perspective of a bench folded for storage.

Fig. 3 is a perspective of one of the struts which extend between the legs and are detachably connected therewith.

Fig. 4 is a vertical section through the abutting ends of the seat sections and the legs connected thereto and illustrating the connection between said legs and struts.

Fig. 5 is a section taken on line 5—5 of Fig. 4.

Fig. 6 is a perspective of a portion of the bench including one of the legs and illustrating the struts separated from said leg.

Fig. 7 is a perspective of the block which is detachably secured between the legs adjacent the contiguous ends of the seat section.

The invention is exemplified in a foldable bench which comprises longitudinally extending and rectangular seat sections 10 and 11 which, when supported in endwise relation, form an elongated seat for a group of persons. A transverse bar 12 is rigidly secured to the inner side of each seat section along its outer edge and a transverse bar 13 is rigidly secured to the inner side of each seat section along its inner edge. The seat sections are foldably connected together by hinges 14 which are inset in the bars 13 and are provided to foldably connect the seat sections so they may be swung into endwise relation as illustrated in Fig. 1 and to be folded together in substantially parallel relation as illustrated in Fig. 2. The transverse bars 12 and

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13 hold the seat sections when folded in spaced relation to provide a space into which the legs hereinafter described can be folded. When the seat sections are unfolded into endwise relation, the inner ends thereof and the transverse bars 13 will be in abutting relation.

A leg 15 extends transversely across the outer end of each of the seat sections and is foldably connected thereto by hinges 16 inwardly of the transverse bars 12 respectively. A similar transversely extending leg 17 extends across the inner end of each of the seat sections and is foldably connected thereto by hinges 18 inwardly from the transverse bars 13. The outer faces of the upper portion of legs 15 when unfolded abut against the inner faces of transverse bars 12, and the upper face portions of the inner legs 17 abut against the transverse bars 13. The hinges 16 and 18 are provided to permit the legs 15 and 17 to be folded into the space between and into substantially parallel relation with the seat sections as illustrated in Fig. 2.

Struts are detachably connected to the legs on each of the seat sections to lock them together so they will not collapse inwardly when the seat is in use and to more securely support the seat sections. A lower strut 20 and an upper strut 21 are provided for this purpose. Preferably the lower strut 20 is formed of wood and has a greater transverse dimension than thickness and is detachably secured to a pair of legs so it will extend transversely to stiffen the legs against relatively transverse deflection stresses. The upper strut 21 has vertical faces of greater dimension than its thickness for more effectively securing the legs together against relatively vertical deflection.

Each end of each of the struts has affixed thereto a bracket 24 which is provided with an annular tongue 25 and each leg has secured thereto a plate 26, which is provided with an offset portion 27 which forms a socket for slidably receiving the tongue 25 for detachably connecting one end of the strut to one of the legs. Plate 26 has an extension in which a hole 28 is formed and a lock-bolt 29 is slidably mounted in bracket 24 and adapted to enter hole 28 to securely lock the tongue 25 in the socket 27 and to securely lock one end of the strut to one of the legs. Each bolt 29 is held, when shifted into hole 28 in plate 26, by a spring 30.

The inner legs 17 are also secured together in alignment with the lower struts 20 by a strut block 31 which has secured thereto a plate 32 with downwardly extending tongues 33 to slid-

ably fit in the socket plates 34 which are rigidly secured to the inner faces of legs 17.

When the bench is unfolded for use as illustrated in Fig. 1 the struts 20 and 21 will be locked to the legs 15 and 17 by the bolts 29 and the tongue 25 in the sockets 27. The strut-block 31 will be secured between legs 17 and the seat sections will be firmly supported and secured in endwise relation for use by a group of persons. When it is desired to fold the bench for storage or transportation the struts 20 and 21 are detached from the legs by withdrawing the bolts 29 from plates 26 and sliding the tongues 25 out of the sockets 27 and the strut-block 31 is detached from legs 17 by withdrawing the tongues 33 from the sockets formed by plates 34. The legs 15 and 17 are then folded into parallel relation with the seat sections respectively and the seat sections are folded on hinges 14 into substantially parallel relation and spaced apart by transverse bars 12 and 13 to form a space between them for folded legs, as illustrated in Fig. 2. The struts 20 and 21 are inserted into the space between the folded legs so that all the parts of the bench will be compactly arranged together and may, if desired, be placed in a box or carton for transportation or storage.

The invention exemplifies a folding bench which has a considerable capacity and comprises seat sections in endwise relation and foldable together.

The invention also exemplifies legs which are foldable between seat sections and detchable struts which may be packed between the folded legs.

The invention also exemplifies a foldable bench in which the seat sections are rigidly supported by the foldable legs and struts.

The invention is not to be understood as restricted to the details set forth since these may be modified within the scope of the appended claims without departing from the spirit and scope of the invention.

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

1. An article of furniture comprising a pair of top sections adapted when in endwise relation to form an elongated top; hinge means foldably connecting the contiguous ends of the top sections; a pair of leg structures for each top section, hinge means for connecting the leg structures to the top sections adjacent their ends respectively; rigid longitudinal bars adapted to extend directly between the pairs of leg structures on the top sections respectively; means for detachably and rigidly locking the ends of the bars to the legs, the leg structures adjacent the contiguous ends of the top structures being pivotally connected thereto in spaced relation when the leg structures are in operative position, a rigid block adapted to extend between the leg

structures at the pivotally connected ends of the top sections and substantially in longitudinal alinement with the bars, and tongue and socket means for detachably and rigidly securing the block to said last named leg structures.

2. A foldable article of furniture comprising a top; leg structures pivotally connected to the underside of the top adjacent its ends; a longitudinal bar adapted to extend directly between the leg structures for holding them in fixed operative position; and detachable connections between the ends of the bar and the leg structures, each including an angular plate of flat metal having one angular member fixed on one of the longitudinal faces of the bar and another angular member forming a substantially right angled tongue spaced from the adjacent end of the bar, and a plate of flat metal fixedly secured to the inner side of the leg structure and provided with a central integral transverse offset forming a socket open at its upper and lower ends, in which the tongue fits and is slidable, the offset portion of the plate fitting in the space and confined between the tongue and the end of the bar.

3. A foldable article of furniture comprising a top; leg structures pivotally connected to the underside of the top adjacent its ends; a longitudinal bar adapted to extend directly between the leg structures for holding them in fixed operative position; and detachable connections between the ends of the bar and the leg structures, each including an angular plate of flat metal having an angular member fixed on one of the logitudinal faces of the bar, and another angular member forming a substantially right angled tongue spaced from the adjacent end of the bar, a plate of flat metal fixedly secured to the inner side of the leg structure and provided with an integral transverse offset forming a socket having parallel edges and open upper and lower ends in which the tongue fits and is slidable, the offset portion of the plate fitting and confined in the space between the tongue and the end of the bar.

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