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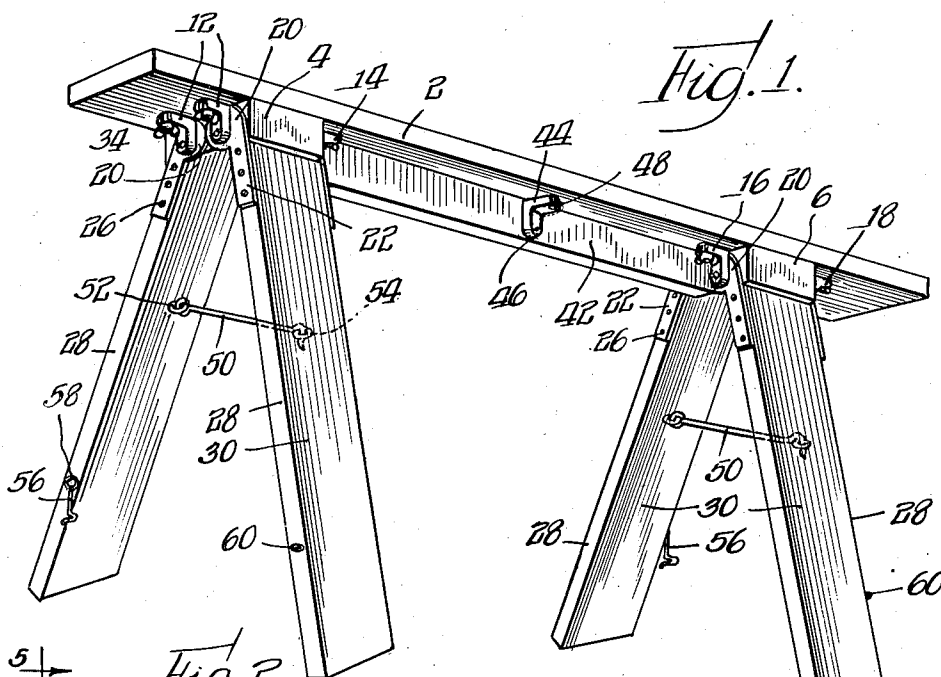
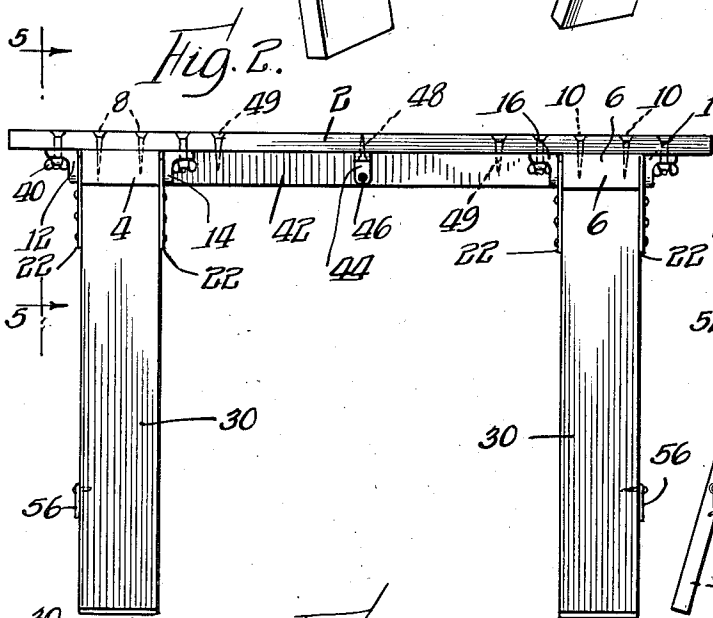
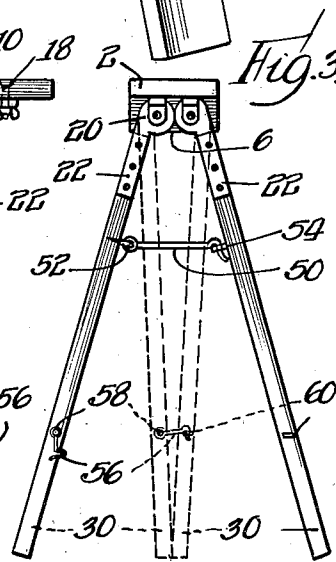
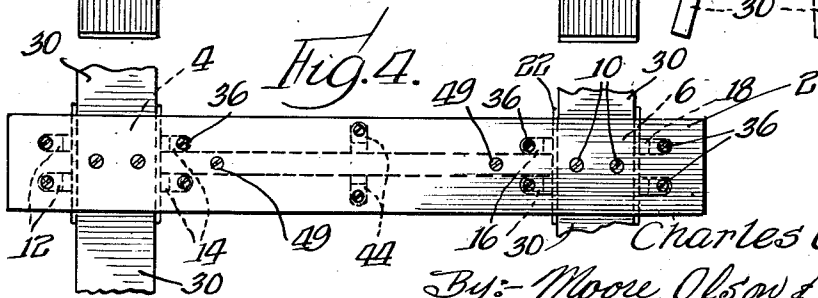
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FOLDING SAW HORSE

Filed Jan. 5, 1946

2 Sheets-Sheet 1



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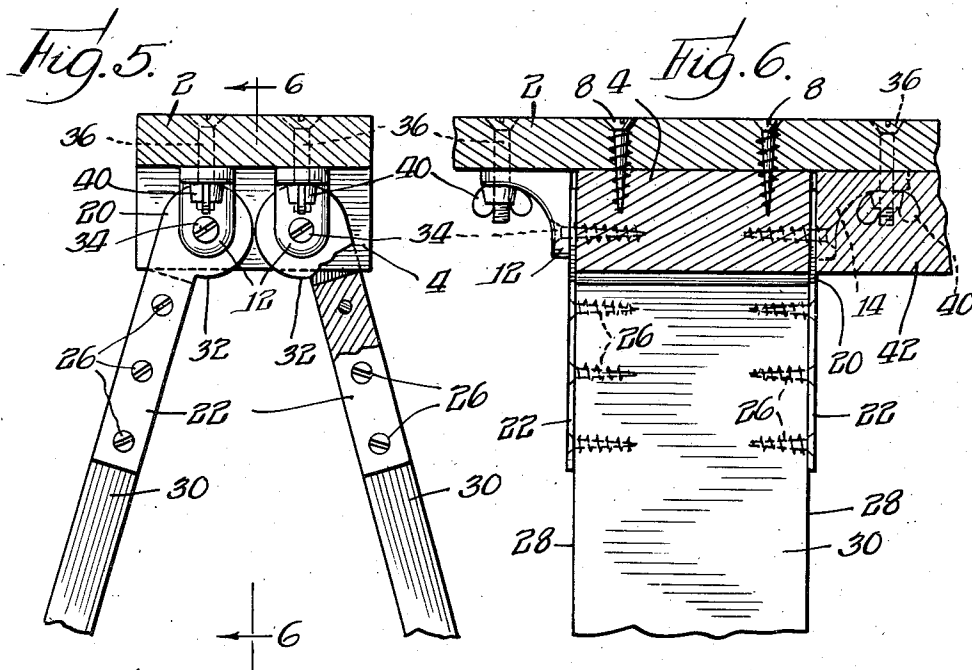
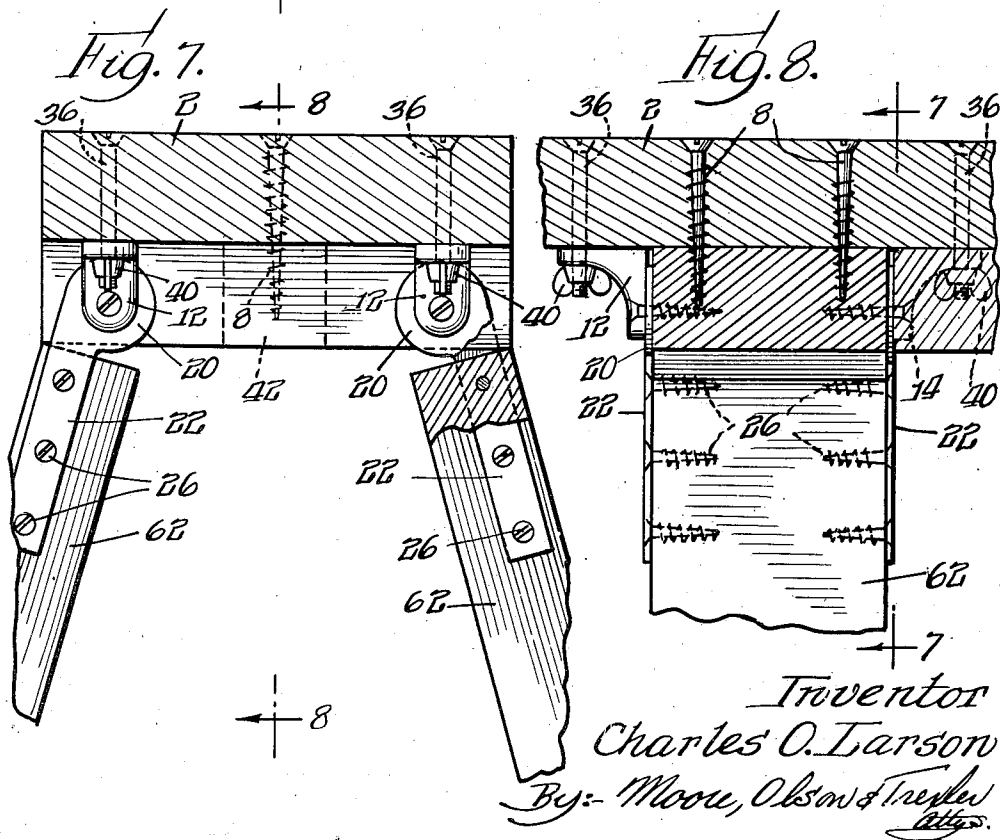
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,427,679

FOLDING SAWHORSE

Charles O. Larson, Sterling, Ill.

Application January 5, 1946, Serial No. 639,237

8 Claims. (Cl. 304-5)

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This invention relates to folding saw horses,

Among the objects of the present invention is to provide a folding saw horse adapted to be made from standard sizes of lumber cut to required lengths, and wherein simple, readymade hardware pieces are utilized to foldably hinge the legs of the saw horse to the top member in such a manner that they may be held in predetermined spread apart position, or may be folded to juxtaposition.

Another object of the invention resides in providing a saw horse wherein the legs are pivoted to blocks mounted on the underside of the top member of the saw horse by means of a combination of straps and L-shaped rigidifying brackets which not only secure the legs to the blocks, but also secure the blocks to the top to make a rigid saw horse wherein the legs are collapsible to juxtaposed folded position or may be retained in open, spread apart position.

These and other objects of the invention will be apparent from a perusal of the following specification, when taken in connection with the accompanying drawings, wherein:

Figure 1 is a perspective view of the improved folding saw horse;

Figure 2 is a front view thereof;

Figure 3 is a side view thereof;

Figure 4 is a plan view of the device as shown in Figure 2;

Figure 5 is a vertical cross section taken on the line 5-5 of Figure 2;

Figure 6 is a fragmentary cross sectional view taken on the line 6-6 of Figure 5;

Figure 7 is a modified type of construction, being taken on the line 7-7 of Figure 8; and

Figure 8 is a fragmentary cross sectional view taken on the line 8-8 of Figure 7.

Referring now to the drawings in detail, the folding saw horse may be made in a standard size, such as 24 inches high when in use, and 36 inches overall, using standard one inch lumber, which when suitably planed measures approximately three fourths of an inch in thickness. The saw horse comprises a top piece 2, preferably formed of one inch lumber, and of the general dimensions shown in Figure 1. Suitably affixed to the top piece 2 at the ends thereof and spaced from the opposite ends, are two wooden blocks 4 and 6 which are arranged so that the grain thereof runs transversely of the longitudinal axis of the top 2. Preferably these blocks 4 and 6 are secured to the top 2 by means of screws 8 and 10 and/or they may be affixed by the addition of rigid right angle bracing members 12, 14, 16 and

18, there being two on each side of the wooden blocks 4 and 6. These blocks are preferably two by four lumber cut preferably to three and five eighths inches long. The blocks form supports for hinge members which connect to the legs whereby the legs are foldably mounted with respect to the top so as to be spread to an open position as shown in Figure 1, or may be closed to folded juxtaposition, as shown in dotted lines in Figure 3, for purposes of compactness in storing. Means for foldably mounting the legs on the blocks comprises a plurality of hinge plates or straps, each consisting of relatively heavy gauge sheet metal and formed with a substantially circular head portion 20 centrally perforated to receive a pivotal fastening member and providing a bearing surface between the adjacent legs of the racing members and the adjacent surfaces of the blocks. Each head is provided with an integral shank or leg 22, provided with perforations spaced along its length to receive screws, nails, or other fastening means 26 which enter the end edge 28 of the leg boards 30. The shank portion 22 of each strap has parallel edges, one of which passes centrally through the aperture of the circular portion 20 and the other of which lies tangent to the circular portion 20 of the strap. The strap is preferably made the width of the edge 28 of the leg board 30, as shown in Figure 1. Each strap is fastened to the block in such a manner that the lower portion 32 of the circular head of the strap lies approximately one sixteenth of an inch below the lower edge of the blocks 4 and 6. In attaching the straps to the block, each block is measured off approximately one inch from the top and the screw holes are marked three fourths of an inch from either side of the center line, and small screw holes are drilled at the marks. The hinge strap is then mounted on the leg board, as above stated, so that one sixteenth of an inch of the rounded portion is above the uppermost surface of the leg part. The fastening screw 34 is placed through the lower hole of the corner braces 12, 14, 16 and 18, and then through the center hole of the circular portion of the strap and then screwed into a hole in the block 4 or 6 until tight. The hole in the top 2 can then be registered with the top hole of each one of the corner braces, a countersunk head stove bolt 36 being passed through the registering openings and through the upper portion of the corner braces 12, etc., and wing nuts 40 are utilized to hold the same in rigid position. In some instances a central brace board 42 may be disposed between the blocks 4

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and 6 centrally of the top 2 and on the underside thereof, and the angular shaped brackets or corner members 44 may be utilized, the same having one shank as at 46 fastened into the side of the central board 4 and the other shank fastened as at 48 into the underside of the top 2 to lend rigidity to the structure. Screws 49 are used to fasten the ends of the central board 42 to the top 2. Means is provided for holding the legs in open position, as shown in Figure 1, comprising a hook 50 having an eye 52 screwed into one of the legs and another eye 54 screwed into the opposite leg into which the hook is adapted to engage, whereby when in such position the legs will be engaged and spread apart. The legs at the lower portion are provided with a hook 56 and an eye 58 adapted to engage an additional eye 60 on the opposite leg, as shown in dotted lines in Figure 3, for holding the legs in collapsed juxtaposition.

In Figure 7, the top of a slightly modified saw horse is shown, wherein the hinges are mounted on standard two inch lumber. In using the one inch board, the drop of one sixteenth of an inch of the circumference below the bottom edge of the block is required in order to make the legs swing out at the proper angle. In using the two by four or two inch thick lumber, such as 62, see Figure 7, the space required is one eighth of an inch, as the two inch lumber projects one eighth of an inch further than in using one inch lumber. The top board can also be two inch lumber, as shown by the dotted lines in Figure 7, the only difference being that a longer bolt is required.

As shown in Figures 5 and 7, the outer top edge of each leg 62 when in open position contacts and abuts against the underside of the outer edge of the end blocks, thereby forming a limit or stop for the outer spreading movement of the legs. The hooks 50 give added strength and keep the legs the proper distance apart. Otherwise as the joints become loose from wear or picking up the saw horse, the legs would collapse.

Obviously the invention is not limited to the specific details of construction disclosed herein but is capable of other modifications and changes without departing from the spirit and scope of the appended claims.

Having thus described my invention, what is new and desired to be secured by Letters Patent is:

1. A foldable saw horse comprising a top board, a pair of blocks having parallel sides, said blocks being fastened to the underside of the top at points adjacent the ends thereof with the parallel sides extending transversely to the longitudinal axis of the top board, rigidifying fasteners each having legs disposed at right angles and perforated, fastening means passing through the perforations of each of the legs of the fasteners and into the underside of the top board and into the parallel sides of the blocks respectively, metallic straps each having a substantially flat and thin, somewhat circular head with a central opening, and each head having a substantially tangentially extending flat elongated shank, the flat head of each strap underlying the lower leg of said fastener with the central opening of said strap head registering with the perforation of said lower leg, one of said fastening means for the fastener adjacent the head of each strap passing through said registering openings and perforations and into the opposite parallel sides of said blocks whereby to secure said blocks to said un-

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derside of said top board and to also form a pivot about which said straps are adapted to swing relatively to said blocks, an elongated leg member secured at its upper end to each of said shanks, and means for limiting the outward pivotal movement of said legs which are so pivotally secured to a common block whereby said legs when swung outwardly have their outer ends sufficiently spread to support said saw horse in permanent horizontal position.

2. A foldable saw horse comprising a top board, a pair of blocks having parallel sides, said blocks being fastened to the underside of the ends of the top at points adjacent the ends thereof with the parallel sides extending transversely to the longitudinal axis of the top board, rigidifying fasteners each having legs disposed at right angles and perforated, fastening means passing through the perforations of each of the legs of the fasteners and into the underside of the top board and into one of the parallel faces of the block respectively, metallic straps each having a substantially flat, somewhat circular head with a central opening, and each head having a substantially tangentially extending flat elongated shank, the flat head of each strap underlying the lower leg of said fastener with the central bore of said strap head registering with the perforation of said lower leg, one of said fastening means for the fastener passing through said registering openings and into the opposite parallel sides of said blocks to secure said blocks to said underside of said top bore and forming a pivot about which said straps are adapted to swing relatively to said blocks, an elongated leg member secured at its upper end to each of said shanks, means for limiting the outward pivotal movement of said legs which are so pivotally secured to a common block whereby said legs when swung outwardly have their outer ends sufficiently spread to support said saw horse in permanent horizontal position, and a rigidifying elongated support bar secured to the underside of said top between said blocks.

3. A foldable saw horse comprising a top board, a pair of blocks having parallel sides, said blocks being fastened to the underside of the ends of the top at points adjacent the ends thereof with the parallel sides extending transversely to the longitudinal axis of the top board, rigidifying fasteners each having legs disposed at right angles and perforated, fastening means passing through the perforations of each of the legs of the fasteners and into the underside of the top board and into one of the parallel faces of the block respectively, metallic straps each having a substantially flat, somewhat circular head with a central opening, and each head having a substantially tangentially extending flat elongated shank, the flat head of each strap underlying the lower leg of said fastener with the central bore of said strap head registering with the perforation of said lower leg, one of said fastening means for the fastener passing through said registering openings and into the opposite parallel sides of said blocks to secure said blocks to said underside of said top bore and forming a pivot about which said straps are adapted to swing relatively to said blocks, an elongated leg member secured at its upper end to each of said shanks, means for limiting the outward pivotal movement of said legs which are so pivotally secured to a common block whereby said legs when swung outwardly have their outer ends sufficiently spread to support said saw horse in permanent

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horizontal position, the upper leg of each fastener being secured to the underside of said top by bolts passing through registering openings in the ends of the top and through the upper openings in the horizontal leg of said fastener, and a wing nut screwing onto the end of said bolt whereby securely to hold said fastener to the underside of said top board.

4. A foldable saw horse comprising a top board, a pair of blocks having parallel sides, said blocks being fastened to the underside of the ends of the top at points adjacent the ends thereof with the parallel sides extending transversely to the longitudinal axis of the top board, rigidifying fasteners each having legs disposed at right angles and perforated, fastening means passing through the perforations of each of the legs of the fasteners and into the underside of the top board and into one of the parallel faces of the block respectively, metallic straps each having a substantially flat, somewhat circular head with a central opening, and each head having a substantially tangentially extending flat elongated shank, the flat head of each strap underlying the lower leg of said fastener with the central bore of said strap head registering with the perforation of said lower leg, one of said fastening means for the fastener passing through said registering openings and into the opposite parallel sides of said blocks to secure said blocks to said underside of said top bore and forming a pivot about which said straps are adapted to swing relatively to said blocks, an elongated leg member secured at its upper end to each of said shanks, means for limiting the outward pivotal movement of said legs which are so pivotally secured to a common block whereby said legs when swung outwardly have their outer ends sufficiently spread to support said saw horse in permanent horizontal position, said means for limiting the outward pivotal movement of said legs comprising a hook carried by one of said legs and an eye carried by the other, adapted to receive the hook to hold the legs in open position.

5. A foldable saw horse comprising a top board, a pair of blocks having parallel sides, said blocks being fastened to the underside of the ends of the top at points adjacent the ends thereof with the parallel sides extending transversely to the longitudinal axis of the top board, L-shaped rigidifying fasteners each having legs disposed at right angles and perforated, fastening means passing through the perforations of each of the legs of the L-shaped fasteners and into the underside of the top board and into one of the parallel faces of the block respectively, metallic straps each having a substantially flat, somewhat circular head with a central opening, and each head having a substantially tangentially extending flat elongated shank, the flat head of each strap underlying the lower leg of said L-shaped fastener with the central bore of said strap head registering with the perforation of said lower leg, one of said fastening means for the L-shaped fastener passing through said registering openings and into the opposite parallel sides of said blocks to secure said blocks to said underside of said top bore and forming a pivot about which said straps are adapted to swing relatively to said blocks, an elongated leg member secured at its upper end to each of said shanks, means for limiting the outward pivotal movement of said legs which are so pivotally secured to a common block whereby said legs when swung outwardly have their outer ends sufficiently spread to sup-

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port said saw horse in permanent horizontal position, said means comprising a hook and eye secured to said legs for holding the legs in open position, and a hook and eye secured to said legs for holding the legs in collapsed, closed position.

6. A foldable saw horse comprising a top board and a pair of blocks secured to the underside of said top board adjacent the ends thereof, each block having parallel side faces extending transversely to the longitudinal axis of said top board, and pairs of strap members each comprising a central head centrally perforated, the periphery of said head at the bottom portion thereof lying slightly below the bottom edges of the lower peripheral edges of said circular portion of the strap and lying slightly below the bottom edges of the blocks and with the peripheral edges of the circular portions of adjacent pairs spaced slightly apart, said circular portions having integral shank members, one of said parallel edges having its projection passing through the central perforation of said member, leg members secured to said shank members, and rigidifying fastening means and apertured portions arranged with said apertures registering with the central aperture of the head members, and pivotal fastening means passing through said registering members and into said blocks, there being means for securing said rigid fastening members to the underside of said top, said straps being fastened in pairs to the opposite, parallel faces of said blocks at each end of the top whereby said legs may be swung to open, spread apart position, or alternatively to collapsed, juxtaposed position, and means for holding said legs either in open, spread apart position or in collapsed, juxtaposed position.

7. A folding saw horse comprising a top piece, a pair of blocks fastened to the underside of said top piece adjacent the ends thereof, each of said blocks having parallel faces disposed transversely to the longitudinal axis of the top piece, pairs of straps fastened to the opposed parallel faces of each block, each strap comprising a circular flat disc-like member of heavy gauge sheet metal and having an integral shank portion provided with parallel sides, one side having its extension passing through the center of said circular portion, and the other side lying tangent to the periphery of said circular portion, that portion of the periphery of the circular part adjacent the shank lying approximately one sixteenth of an inch below the lower edge of each of said parallel faces of the block and the centers of said circular portions lying three fourths of an inch on either side of the vertical center line of the parallel sides of the block, and brackets having leg portions disposed at right angles and perforated, the perforations of one of said leg portions registering with the centers of the circular portions of said straps, and fastening means passing through said perforations and the centers of the circular portions of said straps into the flat sides of the block, the opposite leg of the fastener being fastened to the underside of said top piece, and leg members secured to the shank portions of said straps.

8. A foldable saw horse comprising a top piece, a pair of blocks depending from the underside of said top piece adjacent the ends thereof and having opposed parallel faces, rigidifying bracket members each having substantially horizontally and vertically disposed legs which are perforated, fastening elements passing through the perforations of the horizontal legs and into the

underside of the top piece, additional fastening elements passing through the vertical legs and into the adjacent opposed parallel faces of the blocks, metallic straps each having an enlarged head portion and a shank portion, the head portion of each strap being centrally apertured and disposed between a vertical leg of each bracket member and the adjacent parallel face of the block with the cooperating fastening element passing through the central aperture and serving as a pivot for the strap, an elongated leg member secured to and carried by each of the shank portions of said strap, and means for limiting outward pivotal movement of said leg members when the same are shifted to supporting position.

CHARLES O. LARSON.

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The following references are of record in the file of this patent:

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Certificate of Correction

Patent No. 2,427,679.

September 23, 1947.

CHARLES O. LARSON

It is hereby certified that errors appear in the printed specification of the above numbered patent requiring corrections as follows: Column 4, line 56, claim 3, for "metallic" read *metallic*; column 5, lines 50, 54, 61 and 64, strike out "L-shaped"; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 20th day of January, A. D. 1948.

[SEAL]

THOMAS F. MURPHY,
Assistant Commissioner of Patents.