April 19, 1927. 1,625,476

M. M. LARSEN

COLLAPSIBLE CAMP BED

Filed March 24, 1924 3 Sheets-Sheet 1

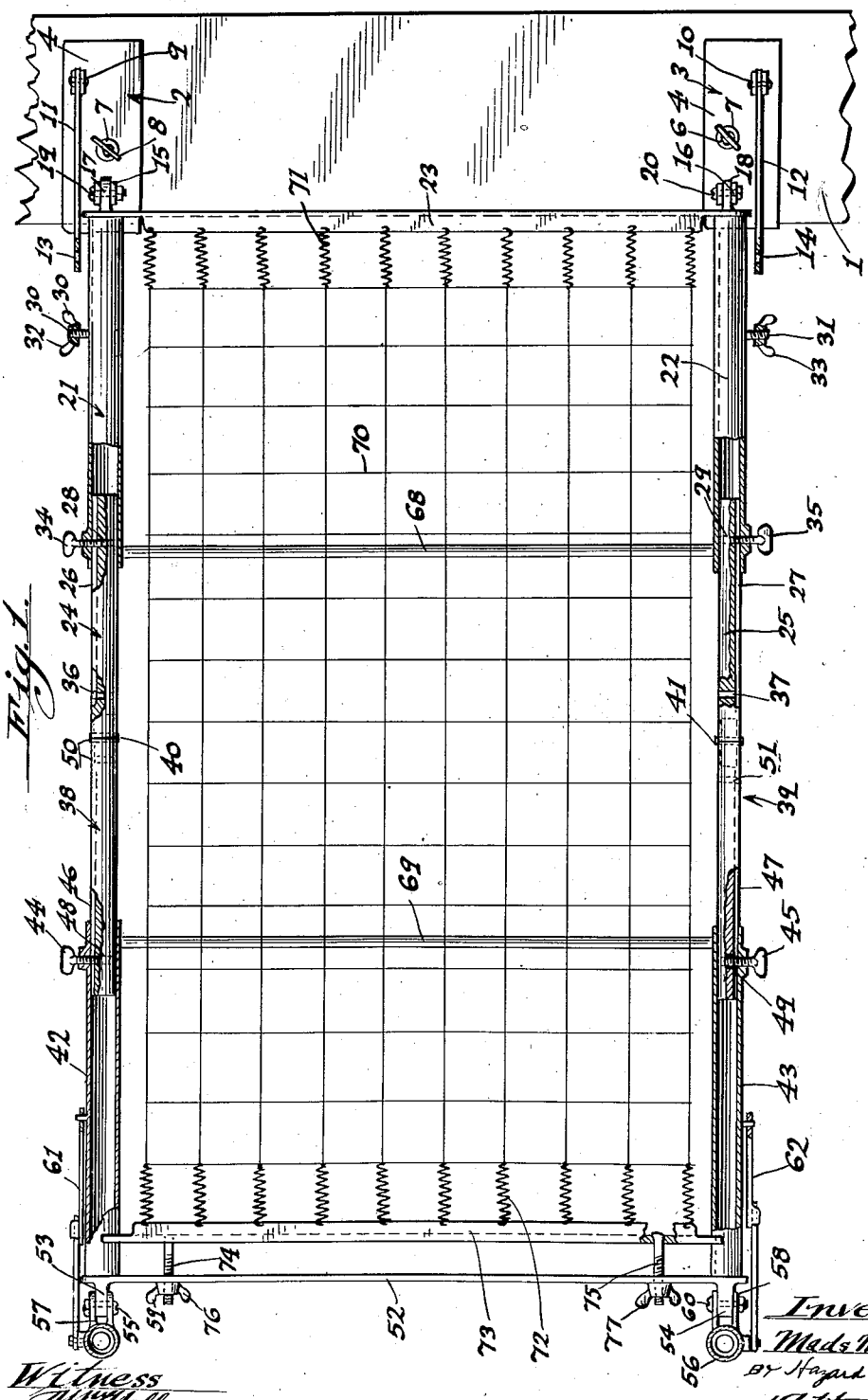


Fig. 1.

Witness
Wm. Hall.

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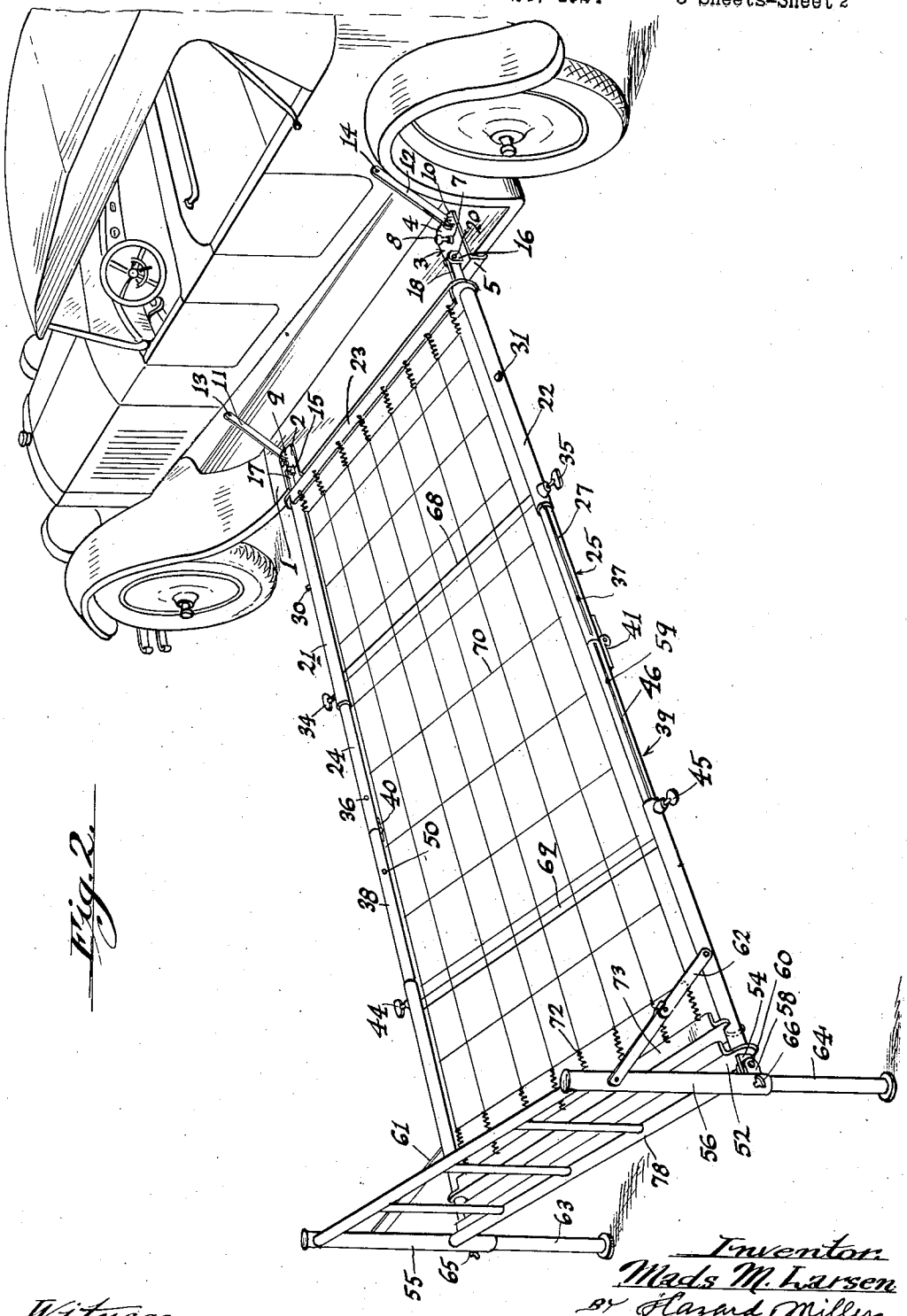


Fig. 2.

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Fig. 3.

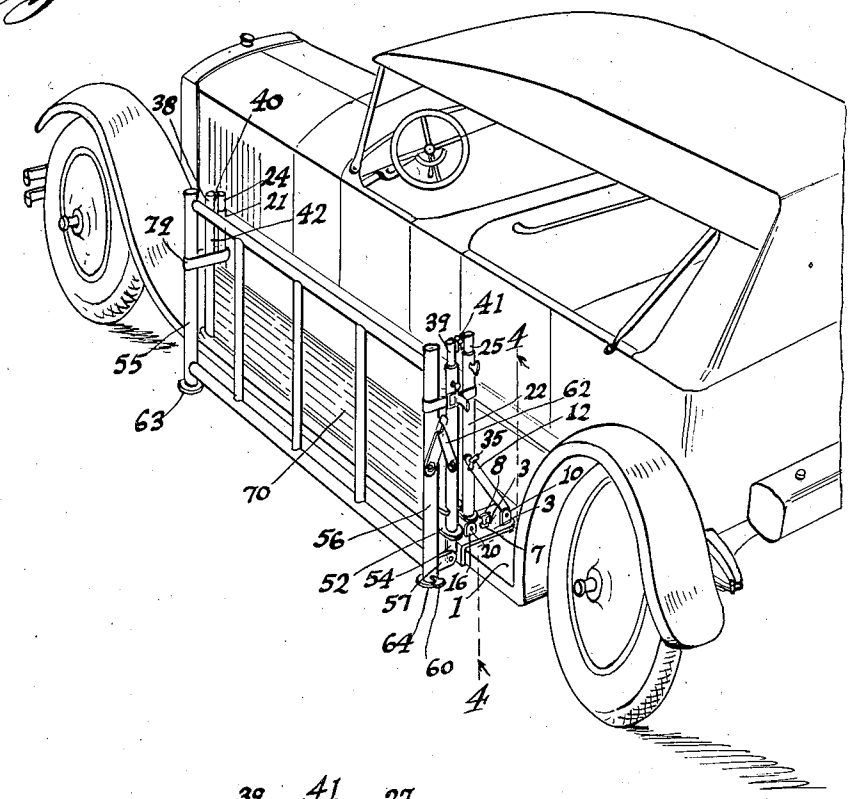
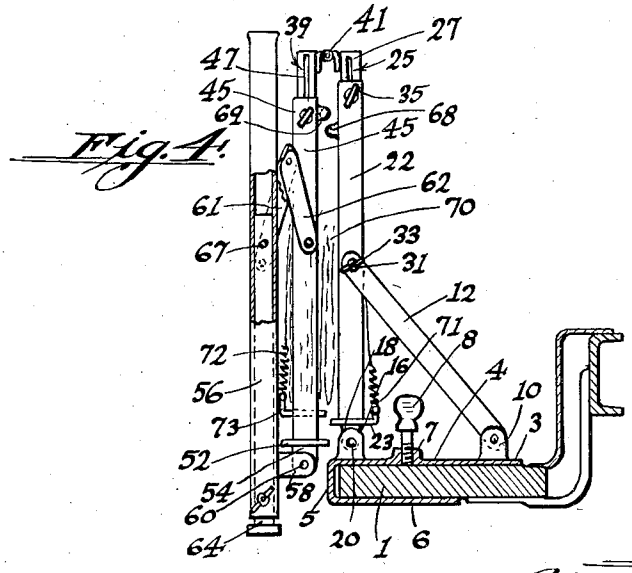


Fig. 4.



Witness:

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Patented Apr. 19, 1927. 1,625,476

UNITED STATES PATENT OFFICE.

MADS M. LARSEN, OF COLTON, CALIFORNIA.

COLLAPSIBLE CAMP BED.

Application filed March 24, 1924. Serial No. 701,454.

My invention relates to collapsible camp beds and consists of the novel features herein shown, described and claimed.

An object is to make a collapsible camp bed having one end adapted for connection to the running board of an automobile, and the bed being adapted to collapse and fold to be carried upon the running board.

Other objects and advantages will appear from the drawings and specification.

The drawings illustrate the invention.

Figure 1 is a top plan view of a collapsible camp bed embodying the principles of my invention, one end of the bed being connected to a running board and the bed being extended or unfolded for use, parts being broken away and shown in section.

Fig. 2 is a perspective of the bed shown in Fig. 1 and showing a part of the automobile.

Fig. 3 is a fragmentary perspective of an automobile with the bed collapsed and folded upon the running board.

Fig. 4 is a vertical cross section on the line 4—4 of Fig. 3.

The details of the collapsible camp bed shown in the drawings are as follows:

The running board 1 is long and flat and the supporting clamps 2 and 3 each have upper plates 4 fitting upon the upper face of the running board 1 and extending substantially across the board and each clamp has a central portion 5 extending from the outer ends of the plate 4 and fitting against the outer edge of the board 1 and a return plate 6 extending from the central portion 5 and fitting under the board 1. Bosses 7 extend upwardly from the plates 4 and clamping screws 8 are screw seated through the bosses 7 and plates 4 to engage the board 1, all so as to form substantial means for connecting the bed to the running board. Ears 9 and 10 extend upwardly from the inner parts of the plates 4 and braces 11 and 12 are pivotally connected to the ears 9 and 10, there being bolt holes 13 and 14 through the swinging ends of the braces 11 and 12.

Ears 15 and 16 extend upwardly from the forward ends of the clamps 2 and 3, said ears being preferably made in pairs and hinge members 17 and 18 fit between the pairs of ears and are held in place by pivot bolts 19 and 20. The pivoted tubular side bars 21 and 22 of the bed frame are rigidly connected to the hinge members 17 and 18 and the fabric supporting rail 23 is rigidly connected at its ends to the ends of the side bars 21 and 22 and to the hinge members 17 and 18. The extension side bars 24 and 25 are adapted to slide in the tubular side bars 21 and 22 and have longitudinally extending grooves 26 and 27 and transverse bolt holes 28 and 29 in line with the grooves 26 and 27. Studs 30 and 31 extend outwardly from the tubular side bars 21 and 22 near their attached ends and wing nuts 32 and 33 are removably mounted upon the studs 30 and 31. Wing head set screws 34 and 35 are mounted through the tubular side bars 21 and 22 near their swinging ends, so that the tips of the set screws operate in the grooves 26 and 27 and in the bolt holes 28 and 29. When the tips of the set screws are sliding in the grooves 26 and 27 the extension side bars 24 and 25 are held against rotation relative to the tubular side bars 21 and 22. When it is desired to collapse and fold the bed, the set screws are all moved outwardly out of the holes 28 and 29 and the extension side bars 24 and 25 will slide into the tubular side bars 21 and 22, and the set screws may be operated to engage in the second bolt holes 36 and 37 to hold the parts securely in their collapsed and folded positions, and the nuts 32 and 33 may be removed from the studs 30 and 31 and the braces 11 and 12 operated to pass the studs through the bolt holes 13 and 14 and the nuts again applied to the studs to hold the parts upright.

The second extension side bars 38 and 39 are substantially like the extension side bars 24 and 25, the two sets of side bars being connected by downwardly folding hinges 40 and 41, so that when the side bars 24 and 25 swing upwardly, the side bars 38 and 39 will swing downwardly. The second tubular side bars 42 and 43 are substantially like the first tubular side bars 21 and 22 and are adapted to receive the second extension side bars 38 and 39 and have wing head set screws 44 and 45 to engage in the grooves 46 and 47 and in the bolt holes 48 and 49 and in the bolt holes 50 and 51. The cross bar 52 rigidly connects the outer ends of the second tubular side bars 42 and 43 and hinge members 53 and 54 are rigid with the cross bar 52 and side bars 42 and 43.

The bed supporting posts 55 and 56 have ears 57 and 58 fitting the hinge members 53 and 54 and pivotally connected by bolts 59 and 60. The bed posts 55 and 56 extend upwardly a considerable distance and the

jointed braces 61 and 62 connect the posts 55 and 56 to the second tubular side bars 42 and 43, so that when the braces are extended the posts are at substantially right angles to the side bars and so that when the braces are folded the posts are along side the side bars. The posts 55 and 56 are tubular and extension posts 63 and 64 slide into the posts 55 and 56 when the bed is collapsed and folded, and when the bed is unfolded the extension posts 63 and 64 will move downwardly out of the posts 55 and 56 and are held in extended positions by set screws 65 and 66 screw seated in the lower ends of the posts 55 and 56 and extending into bolt holes 67 formed in the upper ends of the extension posts 63 and 64.

A cross brace 68 rigidly connects the swinging ends of the tubular side bars 21 and 22 and a similar cross piece 69 rigidly connects the inner ends of the tubular side bars 42 and 43, so as to hold the members forming the side rails of the bed in line. The cross braces 68 and 69 are at the lower sides of the side rail members so as to be below the supporting fabric 70. The supporting fabric 70 is connected to the supporting rail 23 by helicals 71 and similar helicals 72 are at the other end of the fabric. The second fabric supporting rail 73 has notches in its ends and the tubular side bars 42 and 43 fit slidingly in these notches and the helicals 72 are connected to the supporting rail 73. Stud bolts 74 and 75 are fixed through the rail 73 and extend slidingly through the cross bar 52 and wing nuts 76 and 77 are mounted upon the outer ends of the bolts against the cross bar 52, so that by operating the wing nuts the tension of the fabric 70 may be regulated.

The tubular posts 55 and 56 are connected together by a frame 78.

Assuming that the bed is unfolded and extended for use as in Fig. 2, and it is desired to collapse and fold the bed as in Fig. 3, the braces 61 and 62 may be broken upon their joints and the side rails of the bed raised at the transverse centers to bend the hinges 40 and 41, thereby releasing the tension upon the fabric 70. The set screws 34, 35, 44 and 45 may be loosened and the members forming the side rails telescoped together, the extension members 24 and 25 moving into the tubular members 21 and 22, the extension members 38 and 39 moving into the tubular members 42 and 43, the posts 55 and 56 folding downwardly upon the members 42 and 43, the members 21 and 22 folding upwardly, the set screws 65 and 66 may be loosened and the extension posts 63 and 64 moved upwardly and the set screws tightened, the nuts 32 and 33 removed from the studs and the braces 11 and 12 applied with the studs extending through the holes 13 and 14, and the nuts replaced, and straps 79 and 80 may be placed around the upper parts of the folded side rails to hold the package tightly bound to prevent rattling and to prevent accidental extension of the parts from their folded positions. The package thus formed rides upon the running board 1 and is secure and out of the way.

To unfold and extend the bed for use, the straps 79 and 80 are removed, the extension posts 63 and 64 are extended, and the posts 55 and 56 may be grappled and pulled outwardly from the automobile, the braces 61 and 62 unfolded and the sliding parts adjusted and tightened by manipulating the set screws 34, 35, 44 and 45, and finally the members forming the side rails will be swung downwardly to straighten the hinges 40 and 41 and tighten the fabric 70. The hinges 40 and 41 are adapted to butt the ends of the members to which they are connected together and form a straight side bar.

The drawings are more or less diagrammatic and suggestive, and it is obvious that the details of construction may be varied in many ways without departing from the spirit of my invention as claimed.

I claim:

1. A collapsible camp bed comprising clamps adapted to rigidly engage the running board of a vehicle, tubular side bars rigidly connected together and hingedly connected to the clamps, extension side bars mounted in the tubular side bars and having longitudinally extending grooves and transverse bolt holes in line with the grooves, studs extending outwardly from the tubular side bars near their attached ends, wing nuts screw-seated upon the studs, braces pivotally connected to the clamps and having bolt holes through the swinging ends to removably engage upon the studs, set screws mounted through the outer sides of the tubular side bars near their swinging ends so that the tips of the set screws operate in the grooves and in the bolt holes, second extension side bars substantially like the first extension side bars, downwardly folding hinges connecting corresponding extension side bars, second tubular side bars rigidly connected together and slidingly mounted upon the second extension side bars, said second extension side bars having longitudinal slots and bolt holes, set screws in the second tubular side bars with their tips operating in the slots and bolt holes, supporting posts hingedly connected to the second tubular side bars, and jointed braces connecting the posts to the second tubular side bars, so that the extension side bars may be telescoped into the tubular side bars and held by the set screws, the supporting posts may be folded against the second tubular side bars, the first tubular

side bars folded upwardly and the braces attached to the studs.

2. A collapsible camp bed comprising clamps adapted to rigidly engage the running board of a vehicle, tubular side bars rigidly connected at their outer ends by a fabric supporting rail and hingedly connected to the clamps, extension side bars mounted in the tubular side bars and having longitudinally extending grooves and transverse bolt holes in line with the grooves, studs extending outwardly from the tubular side bars near their attached ends, wing nuts screw-seated upon the studs, braces pivotally connected to the clamps and having bolts holes through the swinging ends to removably engage upon the sutds, set screws mounted through the outer sides of the tubular side bars near their swinging ends so that the tips of the set screws operate in the grooves and in the bolt holes, second extension side bars substantially like the first extension side bars, downwardly folding hinges connecting corresponding extension side bars, second tubular side bars rigidly connected at their outer ends by an end cross bar and slidingly mounted upon the second extension side bars, cross braces connecting the inner ends of the first and second tubular side bars, a second fabric supporting rail slidingly mounted upon the second tubular side bars, a spring fabric mounted above the cross braces and connecting the first and second fabric supporting rails so that when the parts are folded the cross braces will support the slack fabric, bolts and nuts adjustably connecting the second fabric supporting rail to the end cross bar, said second extension side bars having longitudinal slots and bolt holes, set screws in the second tubular side bars with their tips operating in the slots and bolt holes, supporting posts hingedly connected to the second tubular side bars, and jointed braces connecting the posts to the second tubular side bars, so that the extension side bars may be telescoped into the tubular side bars and held by the set screws, the supporting posts may be folded against the second tubular side bars, the first tubular side bars folded upwardly, and the braces attached to the studs.

3. A collapsible camp bed having tubular side bars rigidly connected at their outer ends by a fabric supporting rail, extension side bars mounted in the tubular side bars and having longitudinally extending grooves and transverse bolt holes in line with the grooves, second extension side bars substantially like the first extension side bars, downwardly folding hinges connecting corresponding extension side bars, second tubular side bars rigidly connected at their outer ends by an end cross bar and slidingly mounted upon the second extension side bars, cross braces connecting the inner ends of the first and second tubular side bars, a second fabric supporting rail slidingly mounted upon the second tubular side bars, a spring fabric mounted above the cross braces and connecting the first and second fabric supporting rails so that when the parts are folded the cross braces will support the slack fabric, bolts and nuts adjustably connecting the second fabric supporting rail to the end cross bar, said second extension side bars having longitudinal slots and bolt holes, set screws in the second tubular side bars with their tips operating in the slots and bolt holes, and supporting posts hingedly connected to the second tubular side bars, so that the extension side bars may be telescoped into the tubular side bars and held by the set screws and the supporting posts may be folded against the second tubular side bars.

4. A collapsible camp bed having a tubular side bar, an extension side bar mounted in the tubular side bar and having a longitudinally extending groove and transverse bolt holes at the ends of the groove, a set screw mounted through the outer side of the tubular side bar near its swinging end, so that the tip of the set screw operates in the groove and in the bolt holes, a second extension side bar substantially like the first extension side bar, a downwardly folding hinge connecting the first and second extension side bars, a second tubular side bar slidingly mounted upon the second extension side bar, said second extension side bar having a longitudinal slot and bolt holes at the ends of the slot, and a set screw in the second tubular side bar with its tip operating in the slot and bolt holes, so that the first extension side bar may be telescoped into the first tubular side bar and held by the set screw and the second extension side bar may be telescoped into the second tubular side bar and held by the set screw.

In testimony whereof I have signed my name to this specification.

MADS M. LARSEN.