Nov. 4, 1952 L. B. LOVE 2,616,098

FOLDING COT STRUCTURE

Filed Dec. 23, 1949

FIG. 2.

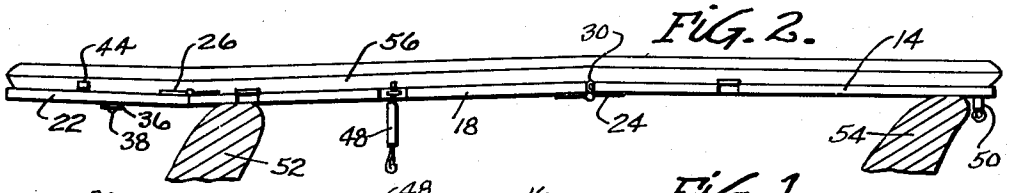


FIG. 1.

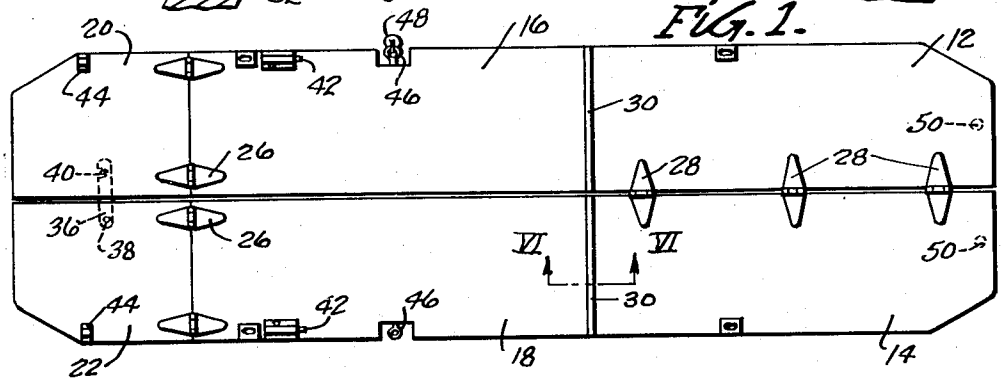


FIG. 6.

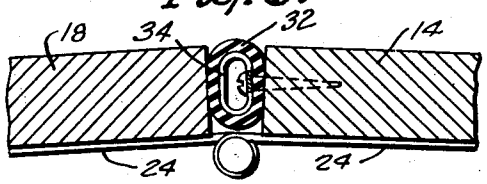


FIG. 7.

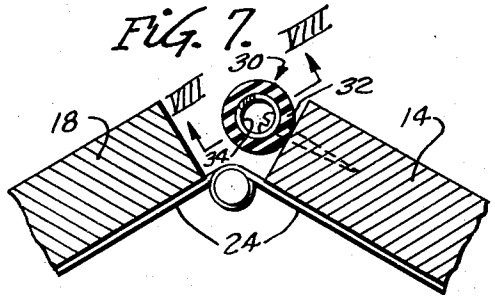




FIG. 8.

FIG. 4.

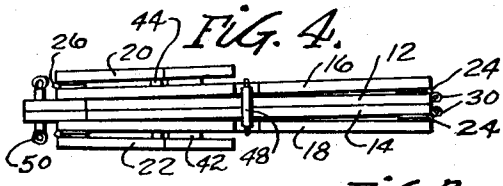


FIG. 5.

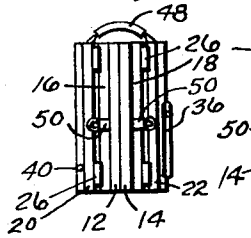
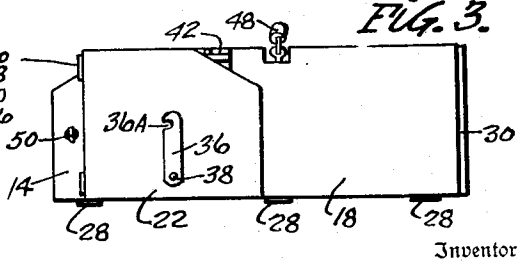


FIG. 3.



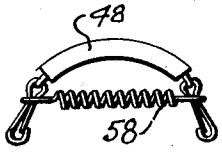


FIG. 9.

Inventor

LELAND B. LOVE

By Weatherford and Weatherford

Attorneys

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FOLDING COT STRUCTURE

Leland B. Love, Memphis, Tenn.

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4 Claims. (Cl. 5—118)

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This invention relates to a folding cot or bed structure, particularly adapted for use in connection with automobiles, which structure is adapted to be unfolded and supported as by the backs of the automobile seats, and which may be folded and collapsed into a compact easily handled package, and placed in the trunk compartment of the automobile, or conveniently disposed within the body of the car should that be found more desirable.

It particularly relates to a structure which will form a support for a mattress or other cushioning pad, the structure being made up of parts which are hinged together in edge abutting relation for folding along the longitudinal center of the structure and for transverse folding into a relatively short, narrow and compact package for transportation or storage, which structure when unfolded will bridge between the backs of the back and front seat and will cantilever forwardly of the back of the front seat.

It preferably is a structure of width to take up substantially one half of the car width and allow use of the other half by a driver and passenger.

The objects of the invention are:

To provide a folding structure adapted to be supported by and bridge between the tops of the front and back seats of an automobile and to cantilever forwardly of the front seat;

To provide a bed structure to be supported by the tops of automobile seats which is longitudinally and transversely collapsible into a narrow, short and compact package;

To provide a substantially rigid supporting structure longitudinally and transversely foldable, which is adapted when extended to form a support for a mattress or other surfacing pad.

The means by which the foregoing and other objects of this invention are accomplished and the manner of their accomplishment will readily be understood from the following specification upon reference to the accompanying drawings, in which:

Fig. 1 is a plan view showing the structure without surfacing pad fully extended.

Fig. 2 is a side elevation of the structure in extended and supported position with a superposed pad indicated.

Fig. 3 is an elevational view of the structure collapsed and folded into a compact package for carrying or for storage.

Fig. 4 is a corresponding top view or plan of the collapsed structure; and

Fig. 5 a corresponding end view.

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Fig. 6 is a fragmentary sectional elevation taken on the line VI—VI of Fig. 1, showing on an enlarged scale one of the hinge connections between the two main body portions of the structure with an interposed resilient cushioning member between the abutting ends of these sections and under compressive stress.

Fig. 7 is a companion view showing the hinge joint partially open and the cushioning member before compression.

Fig. 8 is a fragmentary sectional elevation of the cushioning member taken on the line VIII—VIII of Fig. 7; and

Fig. 9 is a further enlarged view of the handle shown in Fig. 5, particularly showing a tension spring added thereto.

Referring now to the drawings in which the various parts are indicated by numerals:

The structure comprises a pair of leg sections 12, 14; a pair of body sections 16, 18; and a pair of head sections 20, 22. The leg sections 12, 14 are respectively hinged in end abutting relation to the ends of the body sections 16, 18 by hinges 24 which underlie the sections. The opposite ends of the body sections 16, 18 are respectively hinged in end abutting relation to the head sections 20, 22 by hinges 26 which overlie the sections, forming substantially identical, though opposite, structure halves.

The two halves of the structure are hinged together along the longitudinal edges of the leg sections 12, 14 only, by hinges 28 which overlie the sections. The ends of the head and body sections abut when the head sections are in extended position, and cantilever the head sections from the body sections. The leg and body sections 12, 16, and the leg and body sections 14, 18 are respectively spaced slightly apart at their proximate ends and resilient cushioning members 30 are interposed therebetween. The cushioning members preferably are lengths of rubber hose 32 each respectively enclosing similar lengths of coil spring 34, these cushioning members being interposed between the proximate ends of the sections and cooperating with the underlying hinges to effect a bridging joint therebetween, and give resilient support when the structure is supported in use position. The head sections 20, 22, when in extended position, are held together by a latch 36 which is pivotally connected as by a pin 38 to one of the sections as the head section 22 and is provided with a notch 36A which is engaged with a complementary pin 40, carried by the other head section 20, and when latched cooperates with the leg

section hinges 28 to prevent the halves of the structure from spreading apart.

The body sections 16, 18, and their respectively related head sections 20, 22 may be provided with slidable latch pins 42 and complementary latch sockets 44 for securing the head sections against the body sections when in folded or collapsed position. Eyes 46 preferably are secured into the outer edges of the body sections 16, 18 approximately at the center of their length and a carrying handle 48 is provided which may be engaged with the eyes when the structure has been folded, this handle preferably being permanently attached to one or the other of the eyes. Anchor members 50 are secured to and depend from the under sides of the leg sections adjacent their free ends, these members engaging the rear side of the seat back to prevent forward displacement of the structure.

For use, the structure is unfolded to full width and length and may be supported in an automobile by resting the extended structure on the tops of the backs 52, 54 of the front and rear seats with the anchor members 50 engaged behind the upper edge of the rear seat back, and the head sections 20, 22 extending forwardly of the back 52 of the front seat in cantilevered position, and a mattress or cushioning pad 56 is laid on the structure. In use the cushioned joint between the leg and body sections adds resilience to the structure.

For transportation or storage, the mattress or pad 56 is removed and separately rolled into a compact package. The head sections 20, 22 are folded upward and backward about the hinges 26 against the body sections 16, 18 and are secured thereto by engagement of the latch pins 42 with the sockets 44, and the latch 36 is disengaged. One of the halves of the structure is then folded over about the hinges 28 on the other thereof, and the head and body sections of the folded over half are then folded back on the related leg about the hinges 24, the partially folded structure is then turned over and the remaining head and body sections similarly folded back against the related leg sections. The handle 48 is engaged with the eyes 46 to hold the edges of the folded structure opposite the hinges together, completing with the hinged edges a securely held package. If desired, as shown in Fig. 9, the handle may be supplemented by a tension spring 58 to snugly hold that edge of the structure together.

It will be understood that while the structure is particularly adapted for use in an automobile and support by the seat backs, that it is admirably adapted for other support and use.

I claim:

1. A unitary, articulated structure, adapted to be folded into a compact package for carrying or adapted to be unfolded for support by the backs of the seats of an automobile and adapted to carry a cot pad thereon; said structure comprising complementary halves, of equal thickness throughout their lengths and widths, each said half including a body section having a length in excess of one half the distance between said seat backs, a leg section of substantially equal length, and a head section of less length; underlying hinges securing said leg section in end abutting relation to one end of said body section establishing a major structure portion adapted to bridge said seat backs; overlying hinges securing said head section in end abutting relation to the opposite end of said body section providing a cantilevering portion, to provide bed length halves; and overlying hinges securing side edges of said leg sections together in edge abutting relation, and effecting said unitary structure.

2. A unitary, folding structure adapted to be folded into a compact package for carrying or adapted to be unfolded for support by the backs of the seats of an automobile and adapted to carry a bed length cot pad thereon; said structure comprising complementary halves of uniform thickness throughout their lengths and breadths; each said half including a center section having a length in excess of one half the span between said backs, a second section of substantially equal length, and a third section not exceeding such length; underlying hinges securing said second sections in end abutting relation to one end of said center section to form a back bridging portion, overlying hinges securing said third section in end abutting relation to the opposite end of said center section to form a cantilevering portion, whereby to provide bed length halves; overlying hinges securing said edges of said second sections together in edge abutting relation, latch means secured in underlying relation to one of said third sections and adapted for engagement with the other of said third sections when said structure is unfolded, to hold said third sections and said halves in edge abutting relation, and downwardly extending anchor members adjacent the free ends of said second sections adapted to engage the back of the rear said seat against forward displacement and dislodgement of said structure from said rear seat back.

3. A unitary, articulated structure, adapted to be folded into a compact package for carrying or adapted to be unfolded for support by the backs of the seats of an automobile and adapted to carry a cot pad thereon, said structure comprising complementary halves, of equal thickness throughout their lengths and widths, each said half including a body section having a length in excess of one half the distance between said backs, a second section of substantially equal length, and a third section of less length; underlying hinges securing said second section in end abutting relation to one end of said body section establishing a major structure portion adapted to bridge between said seat backs, overlying hinges securing said third section in end abutting relation to the opposite end of said body section establishing a cantilevering section, and overlying hinges securing side edges of said second sections together in edge abutting relation, and accomplishing said unitary structure, said second sections having downwardly extending anchor members adjacent their free ends.

4. A unitary, portable, folding structure adapted to be folded into a compact package for carrying or adapted to be unfolded for support by the backs of the seats of an automobile and adapted to carry a cot pad thereon; said structure comprising complementary halves; each said half including a center section, having a length in excess of one half the distance between said seat backs, a second section of substantially equal length, and a third section; underlying hinges securing said second section in end spaced proximity to one end of said center section, overlying hinges securing said third section in end spaced proximity to the opposite end of said center section, and resilient strips of thickness in excess of said end spacings, respectively disposed in said spaces to effect abutment of said section ends and establish bridging thrust therebetween; overly-

ing hinges securing side edges of said second sections together in edge abutting relation, latch means secured in underlying relation to one said third section and adapted when said structure is unfolded to hold said third sections in edge abutting relation, and downwardly extending anchor members adjacent the free ends of said second sections adapted to engage the seat back supporting said second section against forward displacement and dislodgement of said structure from said back.

LELAND B. LOVE.

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