Dec. 31, 1957 N. A. NEILSON 2,817,852

CAR TOP BOAT AND BED

Filed April 9, 1956 3 Sheets-Sheet 1

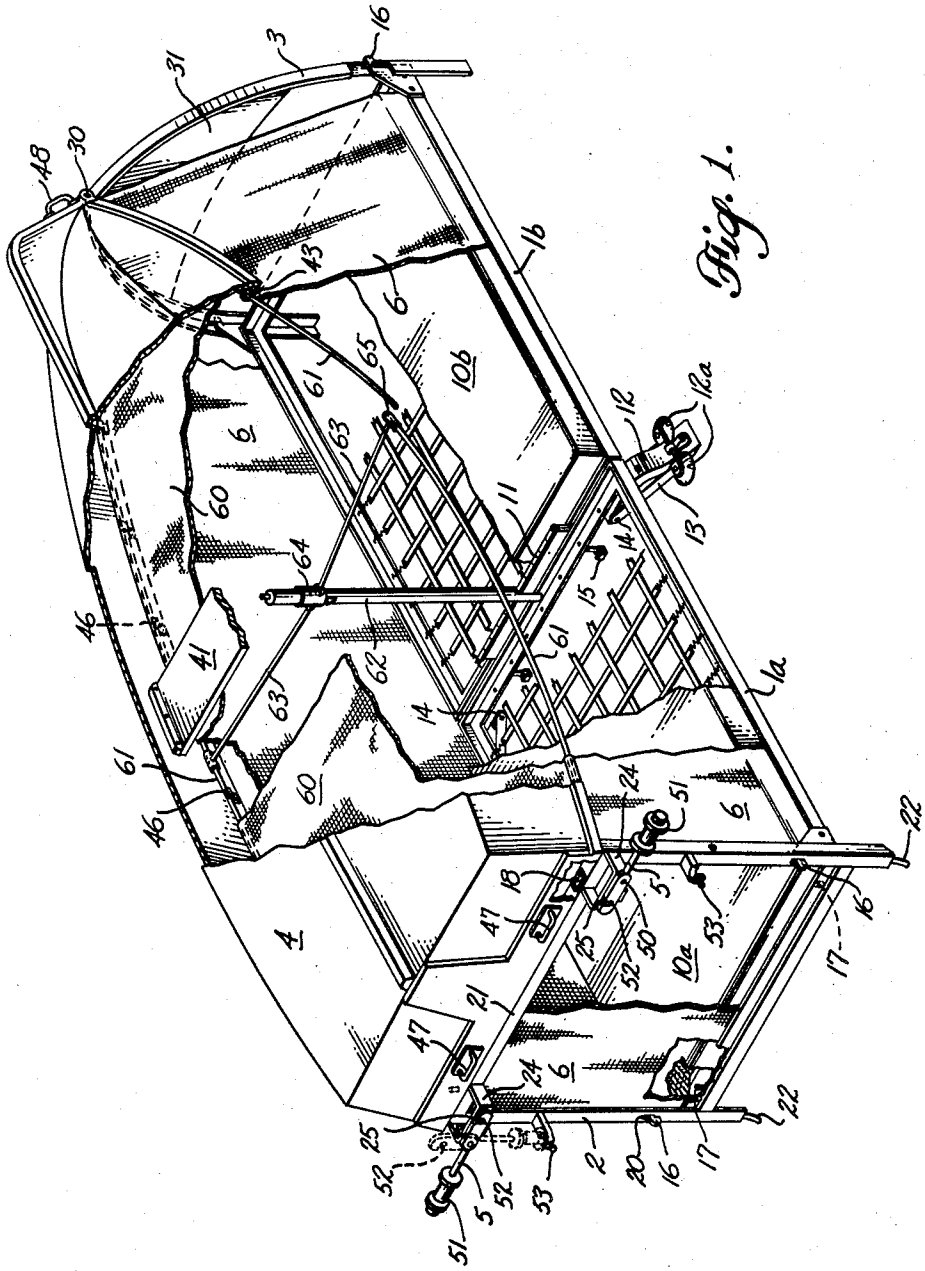


Fig. 1.

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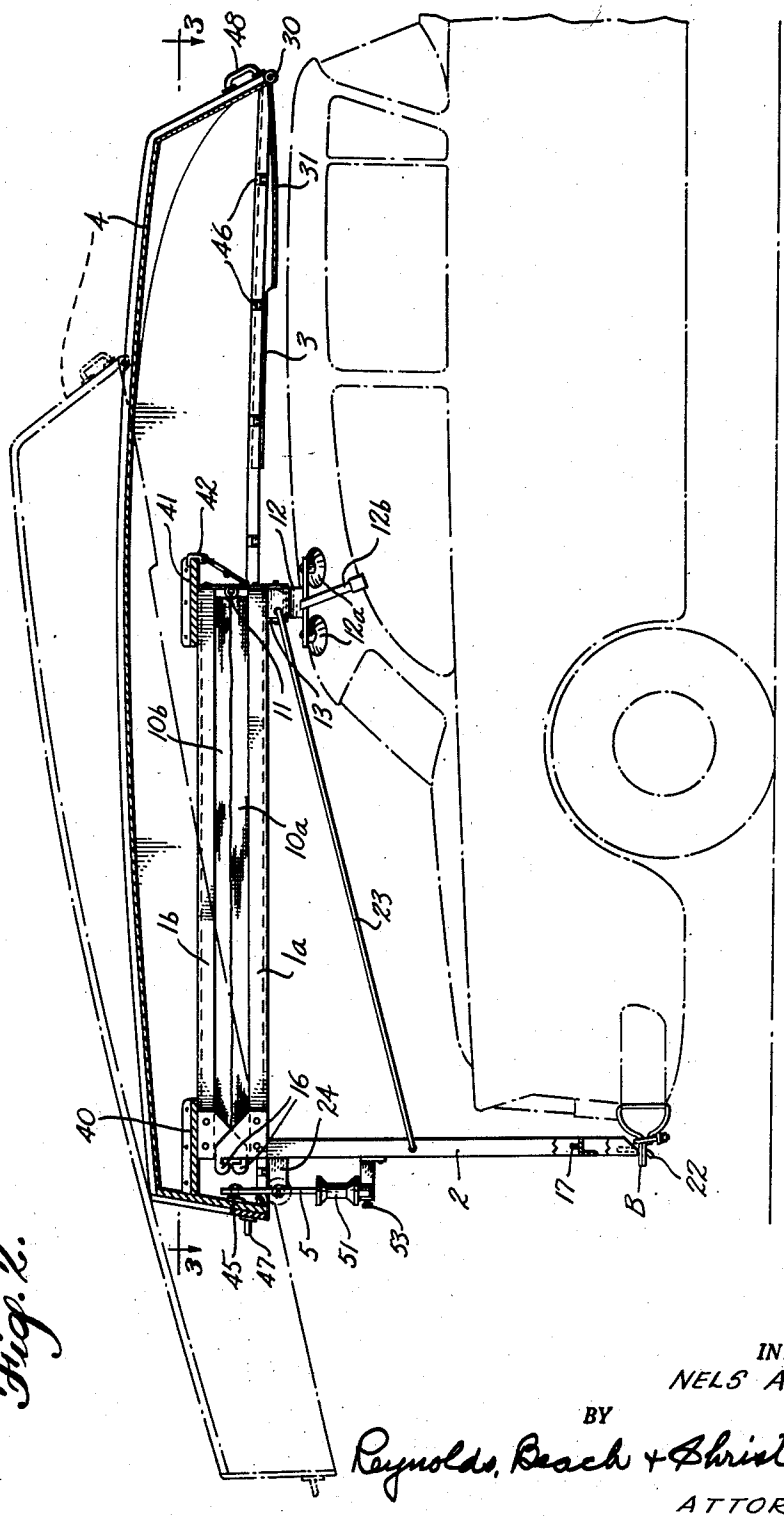


Fig. 2.

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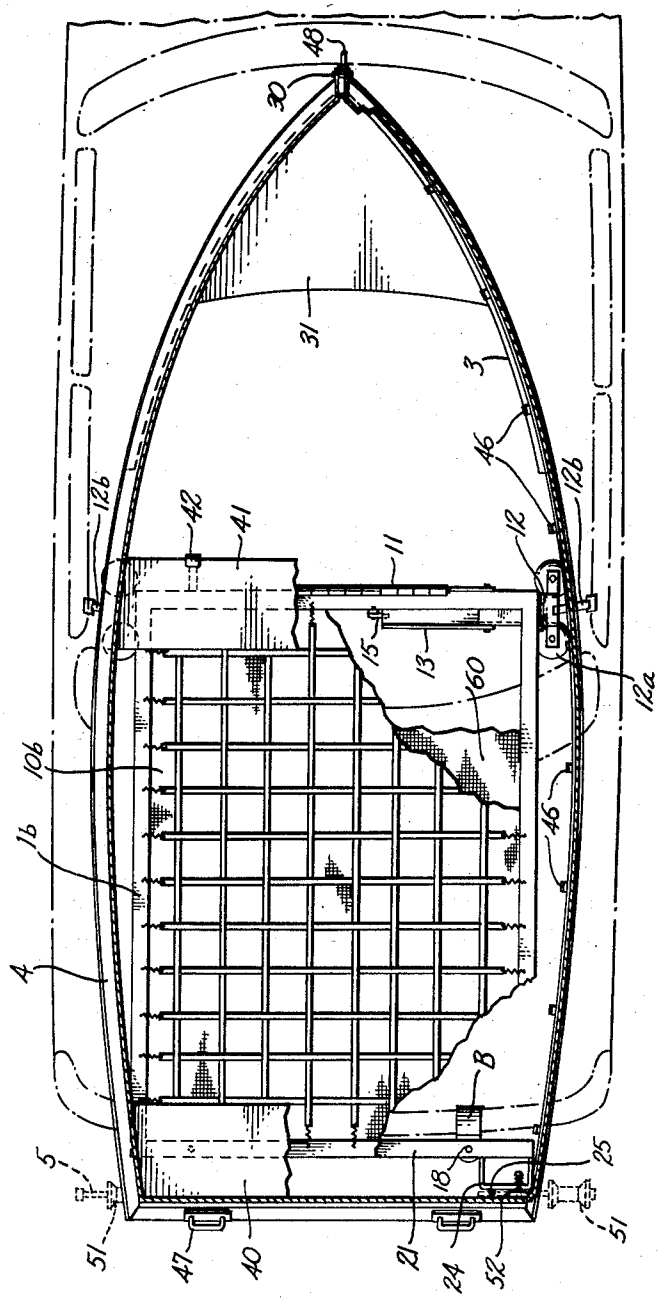


Fig. 3.

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United States Patent Office 2,817,852 Patented Dec. 31, 1957

2,817,852

CAR TOP BOAT AND BED

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Application April 9, 1956, Serial No. 576,942

12 Claims. (Cl. 5—119)

A hunter, fisherman, or other devotee of outdoor sports often goes into areas where overnight accommodations are lacking, and where, in order to pursue his sport, he must carry bedding and a boat, in addition to his gear and supplies, his companions, and sometimes a hunting dog. In other words, he has quite a lot of bulk to transport, and but limited space in which to carry it. Often the roads leading to such places are poor, and it is impracticable to drag a trailer behind the car in which he rides, and so he must carry everything in or upon his car. While he can mount a boat upon the top of his car, usually such a boat is of rather small size and somewhat inconvenient in use, and the small space available for all purposes permits the carrying of no more in the way of bedding than a sleeping bag or the like, which means that the sportsman must try to sleep on the ground, cramped and in discomfort, especially so if the weather is bad.

Primarily, the object of the present invention is to provide a practicable way of transporting adequately comfortable beds and bedding for as many as four persons, and shelter therefor, by means of which the sportsman and his companions may rest comfortably upon a spring base and upon a mattress of full size or nearly so, off the ground, and sheltered from rain and the like, yet may also have available a full size boat, usable separately, yet the boat can constitute an integral part of his shelter for the night, and assists in holding the entire load stable upon the car while traveling. All of this, bed, bedding, and boat, according to the present invention, is so designed as to be capable of being folded up and carried upon the top of the car, taking no more room than would a boat of the size employed, so that the interior of the car and its trunk are available for transportation of persons, dogs, guns, gear and supplies.

Although the boat preferably constitutes an integral part of the overnight shelter, the arrangement is such, according to this invention, that the boat may be removed and used, and the shelter will still be sufficiently intact to keep out rain, so that at the close of each day the returning sportsman will have a dry, comfortable bed, already set up for use.

In addition, it is an object of this invention to provide, as part of the combination, a means to assist in placing the boat upon the car top and removing it therefrom, which means also functions, in its preferred form, to secure the boat adequately upon the car top while traveling.

It is also an object of this invention to provide as part of the shelter an end frame which is also, in the preferred form, a part of the boat itself, and which can constitute a decking for the boat.

It is an object of this invention so to coordinate the sizes and shapes of the boat and its components, and of the bed frames and the remainder of the shelter, that all will interfit compactly and securely when mounted upon the car top for traveling, yet when the shelter is unfolded, it will constitute an entirely adequate and enclosed shelter.

It is, of course, an object to provide a device of the character indicated which can be readily assembled and disassembled, and which can be handled very readily by two persons or, in case of need, by a lone person by himself.

The invention will be better understood from a study of the accompanying drawings, wherein the device is shown in a presently preferred form, and from this specification and the accompanying claims, wherein those features which are of the essence of the invention are set forth.

Figure 1 is an isometric view, broken back in successive steps, illustrating the device set up and in condition for use as a shelter.

Figure 2 is a longitudinal sectional view of the device set up for traveling and mounted upon the top of a car.

Figure 3 is in the nature of a plan view, being actually a section at the plane indicated at 3—3 in Figure 2, showing the device set up for traveling and in its relation to the supporting car.

Two bed frames **1***a* and **1***b* are of suitable conformation, substantially rectangular and of substantially the size of a full double bed. The particular nature of the springs or spring fabric is immaterial, and while coil springs in a suitable frame can be used, yet for minimum thickness the spring fabric is shown in the form of metal tapes supported at the edges by tensioned coil springs. Mattresses **10***a* and **10***b* are intended to rest upon these bed frames **1***a* and **1***b*, respectively. The two bed frames are hingedly connected together by a transverse hinge indicated at **11**, the hinge axis being upraised sufficiently above the level of the frames **1***a* and **1***b* to provide space to accommodate the two mattresses when the frame **1***b* is folded back over the frame **1***a*, as it is for purposes of transportation. Brackets terminating in hooks **16**, later referred to, space apart the free ends of the bed frames when folded. The composite bed frame is supported in part by legs **12**, having rubber feet **12***a* for resting upon the car top and, in order to keep the feet **12***a* from contact with the ground, somewhat longer legs **13** may be provided, hingedly mounted at **14**, which may be swung outwardly to raise the level of the bed frames in the center a little higher than they would be raised by the legs **12**. These legs **13** are securable in a folded position, for transportation, by the securing means at **15**.

Two end frames are provided for supporting the outer ends of the bed frames **1***a* and **1***b*, when unfolded. The rear end frame **2** is approximately rectangular, and is intended not only to support the bed frames and a canopy, to be described later, when the arrangement is set up as a shelter, but this rear end frame **2** serves also, although somewhat indirectly, to support the rear end of the boat as the same is carried above the car. This rear end frame is provided with slots **20** at each side for the reception of the hooks **16** upon the bed frame **1***a*, so as to support the rear end of the bed frame **1***a* at approximately the same level above the ground as its forward end is supported by the legs **13**. Register pins **17** are received in holes in the bed frame **1***a*, to brace the assembly. Above the level of the bed frame, the end frame **2** rises as a rectangular arch for the support of a canopy, when the device is set up as a shelter, and for the support of the boat when the latter constitutes part of the shelter. On the other hand, when the device is folded and mounted upon the car, the cross bar **21** of the rear end frame **2** constitutes a support for the boat in a manner which will be described later; register pins **18** engage within the same holes in the bed frame **1***a* that, in the unfolded position

received the register pins **17**, and this braces the boat-supporting assembly for traveling. The lower ends of the uprights of the rear end frame **2** are provided with hooks **22** which, as Figure 2 shows, are engaged in a bracket B which fastens upon the rear bumper of the car. To further brace the support when mounted upon a car, a longitudinal diagonal rod **23** is employed, connecting the legs **12** and the uprights of the end frame **2**.

The forward end frame **3** could be, but preferably is not, rectangular in form, but rather is pointed, corresponding generally to the shape of the gunwale of a boat **4** which is part of the combination. The end frame **3** supports the forward end of the bed frame **1***b* in the same manner as the frame **2** supports the rear end of the bed frame **1***a*, supporting the unfolded bed frame **1***b* above the ground and coplanar with the bed frame **1***a*, and rising as an arch above the bed frame **1***b*. Preferably, the end frame **3** is hingedly mounted at **30** to the bow of the boat **4**, for a purpose which will appear shortly.

The boat **4**, preferably fabricated of aluminum sheets, is of a length approximating the length of the unfolded bed frames **1***a* and **1***b*, that is to say, it is approximately twelve feet long, much in excess of the length of the usual "cartop" boat, and it has a beam at the gunwale, throughout the greater part of its length, somewhat in excess of the width of the bed frames. Its sides flare upwardly and outwardly, and at the level of the seats or thwarts **40** and **41** its beam is about equal to the width of the folded bed frames. When the boat is set up, inverted, upon the end frames **2** and **3**, the boat covers most of the area of the unfolded bed frames. When the boat, inverted, is supported with its rear thwart **40** and its amidship thwart **41** resting upon the respective ends of the folded bed frames, these thwarts are sufficiently below the level of the gunwale of the boat that the folded bed frames are substantially completely enclosed within the boat, and the boat can not be displaced sidewise, for the bed frames at their sides engage the inner sides of the boat. Various means may be employed for securing the boat so that it can not be displaced longitudinally nor upwardly, and so will not jounce off the supporting bed frames. Such means, for instance, may include the hooks **42** engageable with the amidship thwart **41**, and a hook **52** which engages a stud **45** in the transom, as will later be described in detail.

It will be noted that when the parts are folded for transportation the arched forward end frame **3** may lie along the gunwale of the boat, at the bow thereof, and may be received and retained frictionally or otherwise within a groove **43** in the gunwale. Moreover, by providing a plate **31**, spanning the upper portion of this arch, this plate may constitute a deck over the bow of the boat when the boat is in use, yet is not in the way when the end frame **3** is used as part of the shelter.

The lightest of such boats weighs something in excess of one hundred pounds, and consequently, being also bulky, it is not an easy task to lift the same onto the top of a car, or to remove it therefrom. So that this may be done readily and without likelihood of damage to the finish of the car, or to the boat itself, I provide arms **5** which are pivotally mounted at **50**, between their ends, upon the rear end frames **2** or upon a bracket **24** projecting therefrom, which arms carry rollers **51**. The arm **5** may swing laterally outwardly into a horizontal position, as shown in full lines in Figure 1, or into a vertical position as shown in dash lines in that figure, or as shown in full lines in Figure 2. The hook **52**, previously mentioned, is formed at one end of this arm and at the opposite end is mounted the roller **51**, in such manner that the roller may not only revolve around the arm **5**, but may move axially along the arm. This roller **51** at each side constitutes a support over which may run the gunwales of the boat, in the manner best shown in the dot-dash position of the boat in Figure 2, as the boat is being

raised onto the top of the car, or removed therefrom. The permitted movement of the roller **51** lengthwise of the horizontally disposed arm **5** accommodates the belly of the gunwale. When the boat is in carrying position on top of the car, the hook **52** will engage with the stud **45** of the boat, already mentioned, and when the arm **5** is secured in its vertical position by the securing means at **53**, the engagement of the hook **52** with the boat secures the after end of the boat to the end frame **2**. The arm **5** can be secured in its horizontal position by engagement of the same hook **52** with a stud **25** upon the bracket **24**.

A canopy is provided to close in the bedding and to protect the same against rain. Such a canopy, of canvas or the like, is indicated with its curtains **6** in Figure 1, and preferably it has also a top **60**. This canopy is well supported about its upper edge from the gunwale of the boat, although preferably there are additional means for independent support of the canopy, as will be explained shortly. The canopy may have, for instance, a stiffening bead **61** incorporated about its upper edge, and this bead may be engaged in clips **46** distributed along the inside of the gunwale of the boat, whereby to hold the canopy upraised and to permit it to drape down along and about the side edges of the bed frames. At the rear end the canopy walls are substantially vertical, but at the forward end, where the bow of the boat pinches in, the canopy is similarly pinched in at the top, although at the bottom it still extends to the full width of the bed frame. The top **60** may be integral with the side walls of the canopy, and is supported in the same manner. It will be obvious, of course, that the canopy will be provided with an entrance opening.

Since it is intended that the boat shall be at times removed to leave the shelter in place, it is desirable to provide means independent of the boat for supporting the canopy. To that end, an upright post **62** is provided, the lower end of which may be supported from the bed frames. Spreaders **63**, hingedly mounted upon a slide collar **64** slideable lengthwise of the post, at their outer ends carry short tubes **65** within which are engaged the ends of the stiffening beads **61**. These beads are divided at the point where their ends engage the tube **65**, for the canopy itself must be folded between the bed frames when the bed is folded. When the spreader is upraised along the post **62**, it will support the canopy in the same manner as the spreader of an umbrella maintains the umbrella open. The boat can then be removed, of course first disengaging the clips **46** from the canopy, and the boat may be used with the assurance that the shelter is still intact and tight against the weather.

Assuming the shelter is set up in the manner illustrated in Figure 1, and that it is desired to stow the whole for traveling, it has already been pointed out how the boat may be disengaged and lifted off. Upon removal of the boat, the canopy may be lowered, and the bed frames, being disconnected at **16** from the respective end frames, may be folded over at the hinge **11**, one upon the other, enclosing the mattresses and bedding between them, and enclosing between them ordinarily the canvas of the canopy. Any oars may be so enclosed. Now, the folded bed frame may be lifted onto the top of the car, first having folded the legs **13** inwardly, and having set up the rear end frame **2** upon its bracket B. Now, with the forward end of the folded bed frames supported at **12***a* upon the top of the car, the rear end of the bed frames is engaged with the register pins **18** at the top of the rear end frame **2**, and now the bed frames, bedding and the canopy are supported on the top of the car. The normal straps **12***b* hold down the legs **12** to the car top. The bracing rods **23** may be put in place to maintain the assembly more rigid. Now, with the arms **5** outswung, the boat is tilted with its bow uppermost, and with its gunwale resting upon the rollers **51**, and the boat can then be lifted upwardly and rolled forwardly

until it can be set down with its thwarts 40 and 41 resting upon the folded bed frame. It is held down by the hooks at 52 and at 42. It should be noted that previously to raising the boat, the forward end frame 3 was folded inwardly onto the top of the gunwale, so that it was out of the way, or if this end frame 3 is separate and not hingedly mounted to the boat, it can be stored between the mattresses. The boat, if further securement is wanted, is provided with a hand-hold 48 at the bow by means of which a line may be run from the bow of the boat down to the front of the car and secured, for example, to the car's front bumper. The stern of the boat has further handles 47, by which to assist in handling the boat.

When it is desired to set up the shelter, the boat is removed first, and the folded bed frames are removed from the car, unfolded, and set up with the end frames 2 and 3. The boat is preferably set on top of these end frames, and the canopy is then supported from the boat, or, as alternatively, the canopy is merely raised by the spreaders 63 and the boat is left off, ready for use.

The car top boat and bed described above is designed to accommodate up to four persons, but if only two persons require accommodation, the bed frame would normally be of double width, as shown, but the second, hingedly connected bed frame can be omitted, and the boat can rest, on top of the car, equally well on the one bed frame. Such a boat can be shorter, too; one of eight or nine feet in length will afford adequate space and buoyance for two persons, and will adequately cover the one bed frame, and will be lighter to handle.

I claim as my invention:

1. A car top boat and bed, comprising two mattress-supporting bed frames, transverse hinge means connecting said bed frames end to end for hinging between a folded position, wherein they lie in spaced horizontal planes for storage of mattresses, and a coplanar unfolded position, legs depending from one such frame in the vicinity of the hinge means to support the unfolded bed frames, and formed to rest upon a car top to support the forward end of the folded bed frames, two end frames which in use stand upright at the opposite ends of the unfolded bed frames, the rear end frame being approximately rectangular and of a height to engage a car's rear bumper and to support the rear end of the folded bed frames when the latter are supported at the forward end by said legs upon the car top, means supportingly inter-engageable between the respective end frames and the corresponding bed frames when unfolded, to define feet depending below the bed frames and canopy-supporting arches above the level of such bed frames, a boat of a size to rest, inverted, upon said arches at stern and bow, and to cover the major area of the bed frames, or alternatively to rest inverted upon the folded bed frames as the latter are supported above the car top, and a canopy detachably supported when in use along the gunwale of said boat and draped along the edges of the bed frames, and when not in use folded between the bed frames.

2. A car top boat and bed as in claim 1, wherein the forward end frame is pointed, and is hingedly joined to the boat's stem post, and is of a shape to lie, when folded, along the gunwale of the boat.

3. A car top boat and bed as in claim 2, wherein the forward end frame is formed with a plate at its pointed end, constituting a deck for the boat, and means along the gunwale of the boat for retaining said frame when the latter and its deck is so located.

4. A car top boat and bed as in claim 1, wherein the boat has stern and amidship thwarts located sufficiently below the gunwale, and sufficiently spaced fore and aft, and the boat's beam at the level of the thwarts is just sufficient, to support the inverted boat by its thwarts upon the folded bed frame, and to hold its bow elevated above the car top.

5. A car top boat and bed as in claim 1, wherein the canopy includes a top, and means independent of the boat for supporting said canopy and its top upraised whenever the boat is removed from the unfolded beds.

6. A car top boat and bed as in claim 1, wherein the canopy includes a top, a stiffening bead incorporated within the canopy about its upper edge, an upright post for support in the vicinity of the hinge means, and spreaders supported upon said post and engageable with said bead to support the canopy and its top whenever the boat is removed from the unfolded beds.

7. A car top boat and bed as in claim 1, including a stiffening bead incorporated within the canopy about its upper edge, and clips distributed along the boat's gunwale for supporting engagement with said bead.

8. A car top boat and bed as in claim 1, a boat-supporting arm carried by the upper portion of the rear end frame, at each side, and a roller mounted on each such arm, in position to engage the boat's gunwale for removal from or replacement of the boat upon the car-mounted folded bed frames.

9. The combination of claim 8, wherein each roller is mounted upon its arm for axial as well as rotative movement thereon, to accommodate variations in the beam at the gunwale during removal or replacement of the boat.

10. The combination of claim 8, wherein each boat-supporting arm is pivotally mounted intermediate its ends upon the end frame, to swing its lower end outwardly for support of the boat, or downwardly, the arm's upper end being hooked, and a complemental stud carried by the boat and engaged by the arm's hooked end, when the arm's lower end is swung downwardly, to secure the boat to the rear end frame.

11. A car top boat and bed comprising, in combination, a bed frame, means to support the front end thereof, when not in use, upon and spaced above a car top, a rear end frame of a height to engage and extend upwardly from the car's rear bumper to support the bed frame's rear end at substantially the level of its supported front end, a boat having rear and amidship thwarts located beneath its gunwale by about the thickness of the bed frame, and spaced apart lengthwise to rest upon the front and rear ends of the bed frame, with the boat inverted, the boat having a beam at the level of said thwarts greater than the width of the bed frame, and means to secure the boat, so supported, to the bed frame against relative lengthwise displacement.

12. The combination of claim 11, including a boat-supporting arm pivotally mounted between its ends at each side of the upper portion of the rear end frame, to swing from a vertical to a horizontal position, a roller mounted upon each arm for engaging and supporting the boat's gunwale, when the arm is in horizontal position and the boat is being removed or replaced, the upper end of said arm being formed for engagement with the boat, when the arm is vertical and the boat is supported upon the bed frame, to constitute, at least in part, the means for securing the boat.

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