LUGGAGE CARRIER AND BOAT STRUCTURE

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ABSTRACT
A structure adapted to be selectively converted into an auto top luggage carrier or a boat, and which comprises generally similar forward and rear box-like sections. The sections are adapted to be hingedly interconnected along mating end walls such that the sections may be pivoted into longitudinal alignment to form a boat, or pivoted into overlying relationship to form an enclosed container. Alternately, the side walls of the two sections may be hingedly interconnected to form an enclosed container adapted to be opened from one side thereof. In order to prevent the rise of water between the two abutting end walls when the structure is employed as a boat, a laterally extending exterior groove is positioned in each end wall, the two grooves being aligned in face to face relationship to define a channel intermediate the walls.

7 Claims, 6 Drawing Figures
LUGGAGE CARRIER AND BOAT STRUCTURE

The present invention relates to a structure which is adapted to be easily converted into a number of configurations, each of which finds separate utility. For example on a camping trip, the structure may be employed as a luggage carrier adapted to be positioned on the top of an automobile, and then converted into a full sized boat, or a temporary shelter, when the campsite is reached.

A combination luggage carrier and boat has previously been proposed wherein two similar boat sections are designed to be pivoted to overlire each other and form a closed container. However, such previous structures have suffered from numerous disadvantages which have prevented their general commercial acceptance. For example, the prior structures are designed to be opened only in the endwise direction when used as an auto top luggage carrier, and this makes entry to the container nearly impossible when it is positioned on the auto. In addition, the enclosed area of such prior luggage carriers is extremely small, such that only certain relatively small objects can be carried therein.

A further disadvantage in previously proposed structures of this type resides in the tendency of water to rise between the abutting walls of the front and rear sections when it is employed as a boat. This rise of water between the adjacent surfaces apparently results from either capillary action or the slight relative movement of the two sections during use, which gives rise to a "pumping" action serving to lift the water upwardly and into the boat. The use of rubber gaskets or other sealing members to prevent this rise of water has not proven to be satisfactory since such gaskets readily deteriorate or become dislodged when the structure is subjected to normal hard use.

It is accordingly an object of the present invention to provide a combination boat and luggage carrier which overcomes the above noted disadvantages of the previously proposed structures of this type.

It is a further object of the present invention to provide a luggage carrier which may be positioned on the top of an automobile and opened from the side thereof to facilitate the placement of articles within the carrier while it is positioned on the auto top.

Another object of the present invention resides in providing a boat comprising two pivotable sections, with means for preventing the rise of water between the adjacent end walls which is not subject to deterioration or loss from rough treatment.

These and other objects and advantages of the present invention are achieved in the embodiment illustrated herein by the provision of a structure which comprises a box-like rear section and a similarly shaped forward section. First releasable hinge means are provided along the front wall of the rear section and the rear wall of the front section for selectively pivotally interconnecting these two walls whereby the forward section may be selectively pivoted into substantial longitudinal alignment with the rear section to form a boat, or pivoted over the rear section to form an enclosed container adapted to be opened from one end thereof. Second releasable hinge means are disposed along mating side walls of the two sections whereby the forward section may be pivoted over the rear section to form an enclosed container adapted to be opened from one side thereof. A releasable interconnection is provided between the two sections when the same are disposed in the longitudinally aligned configuration to prevent relative pivoting movement of the two sections about the first hinge means when in use as a boat. In addition, the forward section rear wall and rear section forward wall each include a laterally extending groove. The two grooves are adapted to be aligned to define a channel when the structure is maintained in the boat configuration, the channel serving to prevent the rise of water between the two adjacent surfaces.

Some of the objects and advantages of the invention having been stated, others will appear as the description proceeds, when taken in connection with the accompanying drawings, in which—

FIG. 1 is a side elevational view of the present invention, and shown in use as a luggage carrier positioned on the top of an auto, the pivotal position of the top section being shown in dashed lines;

FIG. 2 is a front view of the structure shown in FIG. 1, with the alternate pivotal position of the top section being shown in dashed lines;

FIG. 3 is a perspective view of the present invention shown in the configuration of a boat;

FIG. 4 is an enlarged sectional view of the present invention taken substantially along the line 4—4 of FIG. 2;

FIG. 5 is a fragmentary perspective view illustrating the interconnecting locking plates which serve to maintain the structure in its boat configuration; and

FIG. 6 is a fragmentary sectional view taken substantially along the line 6—6 of FIG. 3.

Referring more specifically to the drawings, a structure embodying the features of the present invention is indicated generally at 10, and includes generally box-like rear and forward sections 12 and 14 respectively. In one configuration, the two sections are adapted to be pivoted into a longitudinally aligned configuration to form a boat as seen in FIG. 3, or pivoted into an overlying configuration to form an enclosed container as seen in FIG. 1. In another configuration, the two sections are pivotally connected along the sides to form a container adapted to be opened from one side as seen in FIG. 2.

The rear section 12 comprises a substantially flat rectangular bottom wall 16, an upstanding front wall 18, a rear wall 20, and side walls 22 and 23. The ends of the four walls are interconnected to define a closed water tight periphery about the bottom wall 16. Also, the central portion 25 of the rear wall 20 will be seen to extend somewhat above the level of the other walls to facilitate the mounting of an outboard motor or the like when the structure is used as a boat.

The forward section 14 comprises a generally rectangular bottom wall 28 having a forward end 32 which is upwardly curved to define the front wall. The bottom wall 28 is further bounded by the rear wall 30 and side walls 33 and 34 to define a closed water tight periphery.

To releasably interconnect the two sections, releasable hinge means comprising hinges 36 and 38 are disposed along the upper edges of the wall 18 and 30. This hinged interconnection permits the sections to be selectively pivoted into a substantially longitudinally aligned configuration to form the boat shown in FIG. 3.
or pivoted such that the forward section 14 overlies the rear section 12 to form an enclosed container adapted to be opened from one end thereof. As will be apparent from FIG. 4, the longitudinal dimension of the forward section 14 is somewhat greater than that of the rear section 12 such that the forward section forward end 32 overlies the raised central portion 25 of the rear wall 20 to form a substantially enclosed arrangement. Also, it will be noted in FIG. 5 that the pins 36' and 38' of the two hinges are removable such that the two section may be entirely separated.

Second releasable hinge means comprising cooperating hinge plates 40a and 40b, and 42a and 42b, are disposed along the side walls 22 and 33 of the two sections. When it is desired to interconnect these two side hinges, the hinges 36 and 38 are released to separate the two sections and the hinge plates 40a and 40b, and 42a and 42b are connected such that the forward section 14 may be pivoted over the rear section 12 to form an enclosed container adapted to be opened from one side thereof in the manner shown in FIG. 2. By this arrangement, access to the interior of the container is facilitated when the structure is mounted on the top of an auto.

As seen in FIG. 3, the structure further includes a seat 46 mounted in the rear section 12 and a second seat 48 mounted in the forward section. Preferably these two seats include flotation means in the form of a hollow pontoon or suitable flotation material to serve as emergency flotation devices, and they are removably secured in the associated sections to permit the accommodation of luggage and other equipment when used as a carrier as shown in FIG. 4.

When used as a boat, a pair of connectors 50 and 51 are interconnected as shown in FIG. 3 to prevent relative pivoting movement of the front and rear sections about the hinges 36 and 38. The connectors 50 and 51 comprise a pair of cooperating locking plates 50a and 50b, and 51a and 51b respectively, which cooperate to define a vertical aperture extending substantially the full height of the side walls. The central pins 50c and 51c are adapted to be removably disposed within the associated aperture to prevent separation of the plates in the manner indicated in FIG. 5. The fact that the locking plates and central pins extend the full height of the side walls will be seen to provide a secure and rigid interconnection.

The side walls of both the front and rear sections each mount a pair of spaced exterior handles 54 as best seen in FIG. 3. Also, the forward end 32 carries a handle 56, and the rear wall 20 carries a handle 58. These various handles will serve to facilitate lifting of the two sections, and they are also positioned to be vertically aligned when the structure is used as a carrier as seen in FIGS. 1 and 2 to facilitate attachment of the same to the top of an auto.

As seen in FIGS. 4 and 6, the forward section rear wall 30 and the rear section forward wall 18 include a laterally extending exterior groove 60 and 61 respectively. These grooves are adapted to be aligned in face to face relationship when the sections are connected and maintained in the longitudinally aligned configuration, and they define a cylindrical channel intermediate the walls. As will be apparent in FIG. 6, the channel is somewhat above the center line of the side walls so as to be above the normal water line. Surprisingly, it has been found that this channel serves to effectively prevent the rise of water upwardly between the walls. It is believed that this channel functions by providing an enlarged area in which capillary action between the closely spaced sidewalls is broken and in which any pumping action otherwise arising from relative movement of the walls is dissipated. Further, the channel provides a path of drainage to the sides of the boat for any water which might rise upwardly between the walls and reach the groove. Thus the use of conventional sealing gaskets for this purpose is unnecessary.

The structure 10 is illustrated in the drawings as being fabricated from a sheet metal material such as aluminum. It will be appreciated however that other structural materials could be employed, such as wood or molded fiber glass.

In the drawings and specification, there has been set forth a preferred embodiment of the invention, and although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation.

What is claimed is:

1. A structure adapted to be selectively converted into a boat or an enclosed storage container suitable for carriage on the top of an auto or the like and comprising a box-like rear section comprising a substantially flat rectangular bottom wall and upstanding front, rear, and side walls defining a closed water tight periphery, a forward section comprising a generally rectangular bottom wall having an upwardly curved forward end, and upstanding rear and side walls, said curved forward end, rear and side walls defining a closed tight periphery, first releasable hinge means disposed along said rear section front wall and said forward section rear wall for selectively pivotally interconnecting said front and rear walls whereby said forward section may be selectively pivoted into substantially longitudinal alignment with said rear section to form a boat, or pivoted over said rear section to form an enclosed container adapted to be opened from one end thereof, second releasable hinge means disposed along one side wall of said rear section and one side wall of said forward section for selectively pivotally interconnecting said side walls whereby said forward section may be pivoted over said rear section to form an enclosed container adapted to be opened from one side thereof, and means for releasably interconnecting said rear and forward sections when the same are connected by said first hinge means and maintained in the longitudinally aligned configuration to prevent relative pivoting movement of the sections about said first hinge means.

2. The structure as defined in claim 1 wherein said means for releasably interconnecting said rear and forward sections comprises a cooperating locking plate carried by each section, said locking plates defining a vertical aperture extending substantially the full height of the side walls of said sections when the same are maintained in the longitudinally aligned configuration,
3,684,139

and a pin adapted to be removably disposed within said aperture to prevent separation of said hinge plates.

3. The structure as defined in claim 1 wherein said rear section rear wall includes a central portion having a vertical height somewhat greater than the height of the front and side walls to thereby facilitate attachment of an outboard motor or the like, and the longitudinal dimension of said forward section is somewhat greater than that of said rear section whereby the forward section forward end overlies the rear section rear wall when the forward section is pivoted over the rear section to form an enclosed container.

4. The structure as defined in claim 1 wherein the forward section rear wall and the rear section forward wall each include a laterally extending exterior groove, the grooves being adapted to be aligned in face to face relationship when the sections are connected and maintained in the longitudinally aligned configuration, said grooves defining a channel intermediate said walls which serves to prevent the rise of water therebetween.

5. The structure as defined in claim 1 wherein at least one handle is secured to each of said forward and rear section side walls to facilitate lifting of the structure and attachment of the same to the top of an auto or the like.

6. The structure as defined in claim 1 further comprising a seat adapted to be removably secured in each section, said seats including flotation means for serving as an emergency flotation device.

7. A structure adapted to be selectively converted into a boat or an enclosed storage container suitable for carriage on the top of an auto or the like and comprising a box-like rear section comprising a substantially flat rectangular bottom wall and upstanding front, rear, and side walls defining a closed water tight periphery, a forward section comprising a generally rectangular bottom wall having an upwardly curved forward end, and upstanding rear and side walls, said curved forward end, rear and side walls defining a closed water tight periphery, hinge means disposed along said rear section front wall and said forward section rear wall for pivotally interconnecting said front and rear walls whereby said forward section may be selectively pivoted into substantial longitudinal alignment with said rear section to form a boat, or pivoted over said rear section to form an enclosed container adapted to be opened from one end thereof, means for releasably interconnecting said rear section front wall and said forward section rear wall when the front and rear sections are maintained in the longitudinally aligned configuration to prevent relative pivoting movement of said sections about said hinge means, and means for preventing the rise of water between the rear section forward wall and the forward section rear wall when the sections are maintained in the longitudinally aligned configuration and including a laterally extending exterior groove in each of said walls, said grooves being aligned in face to face relationship to define a channel intermediate the walls when the sections are longitudinally aligned.

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