Title: COMBINED BOAT HULL AND PICKUP TRUCK BED COVER

Abstract: A boat shell that is adapted for engagement upon the sidewalls of a pickup truck. In a preferred embodiment, the boat shell is formed with rectangular side rails that are sized and shaped to matingly cover the sidewalls of the bed of a pickup truck. Engagement devices are formed at a stern portion and a bow portion of the boat shell to securely yet removably engage the boat shell to the pickup truck. Preferably, the tailgate of the pickup truck is operable with the boat shell engaged upon the pickup truck. The boat shell is formed with two boat hulls that are disposed in a side by side relationship and generally concave curved portion of the boat shell joins the two boat hulls together, such that the boat shell is comprised a single, integrally formed shape that is preferably composed of fiberglass.
COMBINED BOAT HULL AND PICKUP TRUCK BED COVER

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to small boat hulls and covers for the bed of a pickup truck, and more particularly, to a boat hull that also serves as a camper shell type cover for the bed of a pickup truck.

Description of the Prior Art

Fishermen, and other water sports enthusiasts typically transport their boat to a body of water using a trailer, or for smaller boats by loading the boat into the bed of a pickup truck and securely fastening it within the bed of the pickup truck. When the boat is loaded into the bed of the pickup truck there is less room for other equipment, and when the boat is attached to a trailer and towed behind the truck, there is a need for a truck bed cover and a need for a place to store the trailer.

The present invention solves such problems by designing the hull of the boat such that it will serve as a cover for the bed of the pickup truck.

SUMMARY OF THE INVENTION

The present invention is a boat shell that is adapted for engagement upon the sidewalls of a pickup truck. In a preferred embodiment, the boat shell is formed with rectangular side rails that are sized and shaped to mastingly cover the sidewalls of the bed of a pickup truck. Engagement devices are formed at a stern portion and a bow portion of the boat shell to securely yet removably engage the boat shell to the pickup truck. Preferably, the tailgate of the pickup truck is operable with the boat shell engaged upon the pickup truck.
The boat shell is preferably formed with two boat hulls that are disposed in a side by side relationship and generally concave curved portion of the boat shell joins the two boat hulls together, such that the boat shell is comprised a single, integrally formed shape that is preferably composed of fiberglass. A stern portion of the boat shell includes a motor mounting transom that is formed with an inward slope, such that the top of the transom is disposed closest to the bow portion of the boat shell. In the preferred embodiment, a water flow diverter is formed proximate the stern portion of the curved portion of the boat shell between the two boat hulls. Each of the boat hulls is preferably formed with at least one planing strike for improved operation as a watercraft.

It is an advantage of the present invention that a device which acts as both a boat and a truck bed cover is provided.

It is another advantage of the present invention that the boat shell is adapted for releasable engagement with the sidewalls of a pickup truck.

It is a further advantage of the present invention that the boat shell is formed with rectangular side rails to closely mate with the sidewalls of the pickup truck.

It is yet another advantage of the present invention that the boat shell is mountable upon the pickup truck such that the tailgate of the pickup truck remains operable.

It is yet a further advantage of the present invention that the boat shell is formed with two side by side boat hulls that provide good waterborne stability.

It is still another advantage of the present invention that the boat hull is formed with a flow diverter between two boat hulls for improved operating characteristics.

It is still a further advantage of the present invention that the boat shell is integrally formed of fiberglass for a strong, leakproof structure.

These and other features and advantages of the present invention will no doubt become apparent to those skilled in the art upon reviewing the following detailed description which makes reference to the several figures of the drawings.
IN THE DRAWINGS

Fig. 1 is a perspective view of the present invention as installed upon the bed of a pickup truck;

Fig. 2 is a side elevational view of the present invention installed on the bed of a pickup truck;

Fig. 3 is a perspective view of the boat hull of the present invention floating in a body of water;

Fig. 4 is a rear elevational view of the present invention installed upon the bed of a pickup truck;

Fig. 5 is a rear perspective view of the present invention;

Fig. 6 is a front perspective view of the present invention;

Fig. 7 is a perspective view of the front portion of the bed of the pickup truck depicting a device for securing the boat hull to the bed of the pickup truck;

Fig. 8 is a perspective view depicting the securement of the stern portion of the boat hull to the engagement device depicted in Fig. 7; and

Fig. 9 is a perspective view depicting a bracket for securing the bow end of the boat hull to a rearward portion of the pickup truck bed.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Fig. 1 is a perspective view depicting the boat hull shell 10 of the present invention installed upon the bed of a pickup truck 14. The boat shell 10 may be thought of as consisting of two boat hulls 22 and 26 that are integrally formed together. The outer side rail 34 of the boat shell 10 is formed in a generally rectangular shape to mate with the generally rectangular shape of the upwardly projecting truck bed sidewalls 38.

In the preferred embodiment, when the boat shell is utilized as a truck bed cover, as depicted in Fig. 1, the bow portions 50 of the boat hulls 22 and 26 is disposed at the rearward
end of the truck bed and the stern portion 58 of the boat hulls 22 and 26 is disposed at the front end of the truck bed, proximate the truck cab. This orientation of the boat shell 10 upon the truck bed is believed to provide greater aerodynamic stability to the truck when it is driven with the boat shell engaged upon it. However, the present invention is not to be limited to this orientation of the boat hulls of the boat shell upon the truck bed, and the opposite orientation, with the bow ends 50 of the boat hulls disposed towards the front end of the truck bed is within the contemplation of the inventors.

In the preferred embodiment, as depicted in the side elevational view of Fig. 2, the stern 58 of the boat shell 10 may be formed with a slope that generally matches a slope of the rear window wall 62 of the truck cab. This feature is not a requirement of the present invention, however it is believed to aid in the aerodynamic properties of the boat shell upon the truck, and it may improve the visual esthetics of the boat shell when mounted upon the truck. Additionally, where the stern 58 is sloped as depicted in Fig. 2, it results in some increase in the overall length of the boat shell 10 which can provide stability of the boat shell in its waterborne movement.

Fig. 3 is a perspective view that depicts the boat shell 10 removed from the truck bed and floating upon a body of water 50. As depicted therein, a central transom portion 52 of the stern of the boat shell 10 is adapted for the engagement of an outboard motor 54 thereto.

Detailed features of the boat shell 10 are depicted in Figs. 4 and 5, wherein Fig. 4 is a perspective view from the bow of the boat hulls, and Fig. 5 is a perspective view taken from the stern of the boat hulls. As is depicted in Figs. 4 and 5, the boat shell 10 includes the two integrally formed boat hulls 22 and 26 that are formed side by side with a concave curved portion 80 of the shell 10 formed between them. As will be understood by those skilled in the art, when the boat shell 10 is traveling across water, the curved portion 80 between the two hulls 22 and 26 acts as a funnel to channel water between the two hulls towards the stern of the boat. In a preferred embodiment, a water flow diverter 88 is formed towards the stern
of the curved portion 80 between the hulls 22 and 26. The diverter 88 is tapered rearwardly from a front point 92 where it is flush within the curved portion 80 to an upwardly projecting rear end 96 located at the transom 52 of the boat shell 10. The flow diverter 88 serves to divert water that flows between the hulls 22 and 26, so that the water doesn’t flow directly against the outboard motor shaft and interfere with the efficient performance of the boat and motor. In the preferred embodiment, the overall length of the top of the boat shell from bow to stern is approximately 254 cm, the width from side rail to side rail is approximately 183 cm and each hull 22 and 26 is approximately 62 cm wide; the depth of the boat shell from the side rail to the bottom of each hull is approximately 58 cm, and while the curved surface between the boat hulls varies, its upward curvature at approximately the midpoint of the boat shell is approximately 16" from the bottom surface 112 of the boat hulls 22 and 26 to the middle of the curved surface. The flow diverter projects approximately 12.5 cm at the transom from its base within the stern portion of the curved surface, its length is approximately 137 cm and its width is approximately 8.9 cm. Additionally, as can be seen in Fig. 4, the curved portion 80 of the boat shell between the boat hulls 22 and 26 also facilitates some ability of the driver of the truck 14 to have a rear view through the rear truck window 104 between the two hulls.

As can be seen in Figs. 4 and 5, each of the boat hulls 22 and 26 are formed with planing strikes 108 on both sides of each hull from the bow to the stern. The planing strikes 108 are provided to improve the planing out of the boat from a stationary start to full speed, and to maintain the smooth planing of the boat as it proceeds over the water. As can be best seen in Fig. 5, the bottom surface 112 of each hull 22 and 26 may be rounded for smooth operation of the boat upon water.

As is best seen in Figs. 3 and 5, the motor 54 is mounted to the central rear transom 52 between the boat hull stern walls 116 and 120 of the boat hulls 22 and 26 respectively, and a splash well cutout 124 is preferably formed in the top of the transom 52. It has been found
that the waterborne operational characteristics of the boat shell may be improved where the
outboard motor shaft 128 is mounted at an angle away from normal as shown in Fig. 3. Thus,
in the preferred embodiment, the transom 52, to which the motor 54 is mounted, is formed
with an inwardly sloping angle of approximately 16°, such that the bottom portion 140 of the
transom 52 is disposed closer to the bow of the boat shell than the upper edge 148 of the
transom 52. This feature allows the motor to force the bow downwardly when the boat is
planing and generally provides improved performance.

Fig. 6 is a perspective view of the boat shell 10 taken from the bow end and depicting
the interior of the boat shell 10. As depicted therein, a flat seat member 160 may be formed
within the boat shell cavity to provide seating for the occupants thereof. The flat seat 160
preferably encloses an air space that provides for assured flotation of the boat shell 10. While
Fig. 6 depicts a relatively empty boat shell interior, it is to be understood that further seats
and other accessories for the need and comfort of the occupants may be installed within the
boat shell interior, as will be well understood by those skilled in the art.

As has been described hereabove, the boat shell 10 is designed for secure attachment
upon the truck bed of a pickup truck 14, and Figs. 7, 8 and 9 depict one possible method for
the attachment of the boat shell 10. It is to be understood that many other and different boat
shell attachment mechanisms may be developed, and that the present invention is not to be
limited to the particular engagement devices depicted in Figs. 7-9 and next described. A
device for the attachment of the stern end of the boat shell 10 to the forward end of the
pickup truck bed is depicted in Figs. 7 and 8. As depicted therein, a sturdy metal mounting
bar 200 is engaged to project upwardly at the front end sidewall 38 of the bed of the pickup
truck 14. The mounting bar is formed in engagement with mounting flanges 208 that are
bolted to the upper sidewall edges 212 of the sidewalls 38 of the truck bed. A pair of
outwardly projecting boat shell mounting pins 220 are fixedly engaged to the mounting bar
200 to project rearwardly into the truck bed at locations above the sidewall edges 212 of the
truck bed walls 38. As can be seen in the rear end views 3 and 5 of the boat shell, mounting holes 228 are formed in the stern side rail 34 of the boat shell 10 in an alignment such that the pins 220 will project through the mounting holes 228 when the boat shell 10 is mounted upon the truck 14. Fig. 8 provides a detailed depiction of a mounting pin 220 passing through a mounting hole 228 in the stern side rail 34 of the boat shell 10, such that the mounting of the boat stern of the boat shell can be better understood.

The bow portion of the boat shell 10 is mounted to the truck sidewalls 38 proximate the rear end of the truck, and Fig. 9 depicts a boat shell mounting device for this purpose. As depicted in Fig. 9, an L-shaped metal mounting bracket 240 is bolted to a upper sidewall edge 212 of the truck sidewall 38, and a mounting pin passage hole 248 is formed in the outward projecting flange 252 of the L-shaped bracket 240. As is best seen in Figs. 3 and 6, proximate the bow end of the side rails 34 an upwardly projecting mounting pin 268 is installed. The mounting pins 268 include a cotter pin hole 272 formed therethrough at the distal end. As depicted in Fig. 9, the distal end of the mounting pin 268 passes through the mounting hole 248 such that a cotter pin 288 can be installed through the cotter pin hole 272 to hold the mounting pin 268. It can therefore be understood that the boat shell 10 is mounted onto the truck bed by placing it upon the truck sidewall edges 212 and sliding it forwardly until the forward mounting pins 220 are disposed within the stern mounting holes 228 of the boat shell. Then, the rear mounting pins 268 are inserted downwardly through the mounting holes 248 of the mounting brackets 240. The cotter pins 288 are then inserted through the cotter pin holes 272 to fixedly engage the boat shell upon the truck bed. It is to be understood that the operation of the rear tailgate 290 of the truck is not impeded by the installation of the boat shell 10 upon the truck. Indeed, the tailgate must be lowered to install the cotter pins 288 upon the mounting pins 268. Thereafter, when the cotter pins are installed and the boat shell is firmly engaged on the truck bed, the tailgate is raised and locked in
place, such that access to the cotter pins is prevented, and unauthorized removal of the boat shell from the truck is prevented.

In the preferred embodiment, the boat shell 10 is preferably fabricated from fiberglass, such that it is formed of a unitary construction for strength and lightness of weight. The twin hull configuration is desirable and advantageous in that it provides stability when the device is used as a boat, and a generally aerodynamic shape for reduced wind resistance when the device is used as a truck bed cover.

While the present invention has been shown and described with regard to certain preferred embodiments, it is to be understood that modifications in form and detail will no doubt be developed by those skilled in the art. It is therefore intended that the following claims cover all such alterations and modifications that nevertheless include the true spirit and scope of the inventive features of the present invention.

What is claimed is:
CLAIMS

1. A combined boat and truck bed cover, comprising:

   a boat shell having an overall concave shape to float as a boat when placed in water,

   said boat shell including side rails that are formed in a generally rectangular shape to rest

   upon sidewalls of a bed of a pickup truck.

2. A device as described in claim 1 wherein said boat shell includes an engagement

   device that is adapted to engage said sidewalls of said pickup truck.

3. A device as described in claim 2 wherein said engagement device is adapted to

   engage such sidewalls of said pickup truck proximate a stern portion of said boat shell, and is

   further adapted to engage said sidewalls of said pickup truck proximate a bow portion of said

   boat shell.

4. A device as described in claim 3 wherein said side rails of said boat shell are not

   engagable to a tailgate portion of said pickup truck.

5. A device as described in claim 2 wherein said engagement device include mounting

   holes that project through said side rails for the engagement of said boat shell upon said

   sidewalls of said pickup truck.

6. A device as described in claim 1, wherein said boat shell is comprised of an integrally

   formed material.

7. A device as described in claim 6, wherein said material is fiberglass.
8. A boat that is engagable to a pickup truck bed, comprising:
   a boat shell including two boat hulls that are disposed in a side by side relationship,
   with a concave curved portion of said boat shell joining said two boat hulls together;
   said boat shell further including a transom portion that is disposed at a stern area of
   said boat shell and between said two boat hulls; said transom portion being adapted for the
   engagement of a boat motor thereto; and
   said boat shell having a truck sidewall attachment device formed in side rail portions
   of said boat shell.

9. A device as described in claim 8 wherein said boat shell includes a water flow
   diverter that is disposed at a stern portion of said curved portion of said boat shell, between
   said two boat hulls.

10. A device as described in claim 8, wherein each said boat hull is formed with at least
    one planing strike.

11. A device as described in claim 8, wherein said boat shell is comprised of an integrally
    formed material.

12. A device as described in claim 11, wherein said material is fiberglass.

13. A device as described in claim 8, wherein said transom portion is formed at a sloped
    angle relative to said boat hulls, such that a lower portion of said transom is disposed closer
    to a bow portion of said boat hulls, and an upper edge of said transom is disposed away from
    said bow portion of said boat hulls.
14. A device as described in claim 8 wherein said boat shell includes side rails that form a
generally rectangular outer shape to the boat shell.

15. A device as described in claim 8, wherein said truck bed attachment device includes a
first attachment mechanism disposed at a stern portion of said boat shell and a second
attachment device disposed at a bow portion of said boat shell.
Box No. VIII (v) DECLARATION: NON-PREJUDICIAL DISCLOSURES OR EXCEPTIONS TO LACK OF NOVELTY

The declaration must conform to the standards described in Section 213; see Notes to boxes No. VIII, VIII (b), VIII (v) (in general) and the specific Notes to Box No. VIII (v). If this Box is not used, this sheet should not be included in the request.

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☐ This declaration is continued on the following sheet, "Continuation of Box No. VIII (v)."

Form PCT/R/101 [declaration sheet (v)] (March 2001; reprint January 2003)