May 16, 1950 E. D. REID 2,507,613

OUTBOARD MOTOR SUPPORT

Filed July 19, 1948

Fig. 1

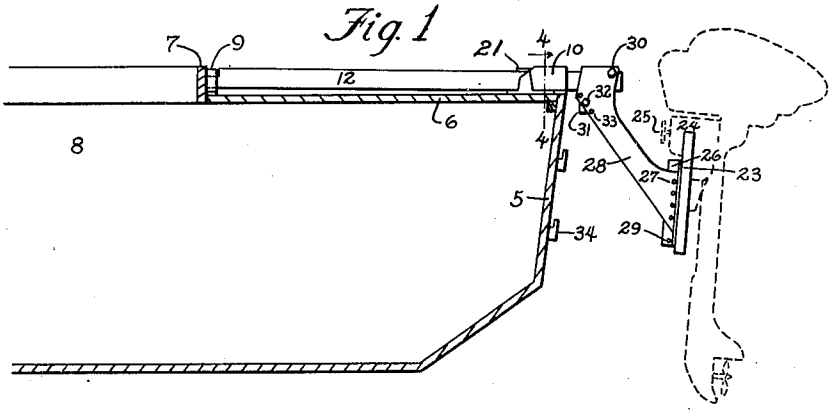


Fig. 2

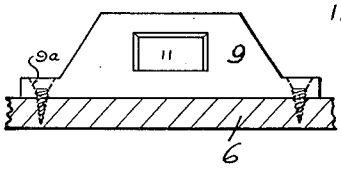


Fig. 3

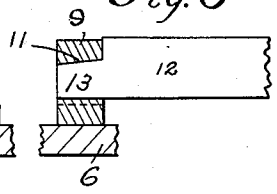


Fig. 4

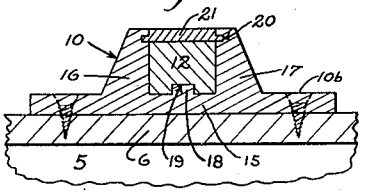


Fig. 5

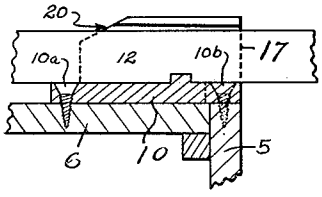


Fig. 6

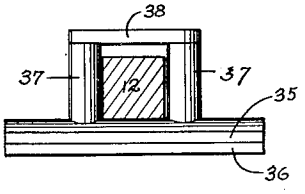


Fig. 7

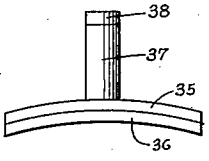


Fig. 9

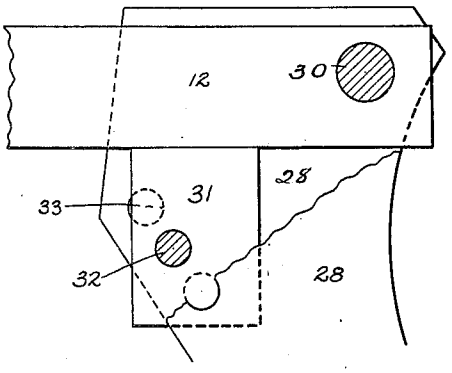
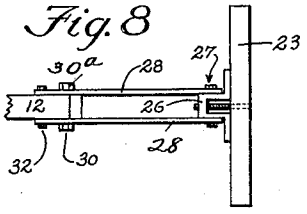


Fig. 8



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OUTBOARD MOTOR SUPPORT

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7 Claims. (Cl. 248—4)

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The primary purpose of the invention is to provide a novel type of outboard motor support particularly adapted for use upon small sailing craft.

The attachment of an outboard motor to the stern or transom of an ordinary row-boat, dinghy, etc., presents no difficulty because the upper edge of the stern or transom presents a free and unobstructed edge over which the outboard motor bracket proper, may hook and be secured by the usual binding screws. However the small sailing boats of the Comet, Snipe and Star classes are so constructed that there is no free, upstanding edge over which the outboard motor bracket may hook. In addition these somewhat flimsy boats are built of such thin and light material that it is difficult to find a place to which supporting structures may be screwed without danger of having the screws tear out, in use.

The manner in which I propose to solve the foregoing difficulties will be best understood by reference to the accompanying drawing, wherein:

Fig. 1 is a side view of an outboard motor support with a portion of the boat to which it is attached, shown in section;

Fig. 2 is a face view of an inner bracket hereinafter described;

Fig. 3 is a fragmentary sectional view of the bracket of Fig. 2;

Fig. 4 is a transverse sectional view upon line 4—4 of Fig. 1 illustrating a rear clamping bracket hereinafter described;

Fig. 5 is a fragmentary longitudinal sectional view through the bracket of Fig. 4;

Fig. 6 is a side view of a shoulder pad for use in carrying the outboard motor and the support of this invention, upon the shoulder;

Fig. 7 is an end view of the shoulder pad of Fig. 6;

Fig. 8 is a plan view of the rear portion of the support, hereinafter described; and

Fig. 9 is a fragmentary view illustrating a pivoted block, hereinafter described.

Like numerals designate corresponding parts throughout the several views of the drawing.

The difficulty inherent in applying an outboard motor support to a small sailing boat of the type described, arises from the fact that the upper edge of the transom or stern 5 is usually flush with a short deck 6, this deck extending forwardly to the coaming 7, which surrounds the entry to the cockpit 8. It is desirable in providing an outboard motor support for vessels of this character to so construct the device that the support and the outboard motor may be

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easily and quickly removed. It is also desirable that the supports for mounting the motor with relation to the boat be of such a nature as to distribute the strain over a considerable area, in view of the very light materials of which these boats are constructed. With these ends in view I mount upon the boat two brackets, to wit: a forward bracket 9 and a rear bracket 10. The forward bracket 9 has an opening 11 formed therein and this bracket is secured approximately at the coaming 7. It may lie directly behind the coaming as illustrated in Fig. 1. An elongated bar 12 of a length to extend from the bracket 9 to a point rearwardly of the bracket 10 has its forward end shaped to engage in the opening 11 as indicated in Fig. 3. By reference to that figure it will be seen that the inner end of the bar is tapered as indicated at 13 so that it will have wedging action in opening 11 and thus be free of objectionable rattling.

By referring to Figs. 4 and 5 it will be seen that the bracket 10 comprises a plate-like bottom portion 15 and a pair of upstanding spaced walls 16 and 17. These spaced walls provide a channel between them into which the bar 12 may be dropped and be there engaged by an upstanding boss 18 formed upon the plate 15. Bar 12 is provided with a recess 19 in its bottom for engagement over the boss 18. Thus endwise shifting of the bar with respect to the bracket 10 is prevented. The inner faces of the walls 16 and 17 are provided with ways or channels 20 for the reception of the edges of a wedge plate 21. After the bar 12 has been placed in the bracket 10, which, except for the presence of the wedge plate, is open at its top to permit the free removal of the bar when desired, the wedge plate 21 is slipped endwise into the ways. By referring to Fig. 5 it will be seen that these ways are slightly inclined toward the rear and that as the plate 21 slides into position it tends to move slightly downward and thus bind the bar 12 firmly in place and against rattling.

A thrust board 23 of a thickness to adapt it to have the conventional outboard motor bracket 24 hooked over the upper edge thereof and be clamped thereto by the conventional thumb screws 25, has a supporting rib 26 upon its forward face, this rib in turn being secured by bolts 27 between a pair of plates 28. Additional openings 29 in this rib provide for its vertical adjustment between the plates. The upper ends of the plates are pivotally connected to the outer end of the bar 12 by a stout binding bolt 30 and an adjusting block 31 is disposed between the

plates 28 and is pivotally mounted upon a bolt 32. This bolt may take into any one of the openings 33 and thus provide for shifting the position of the block 31. However it will be noted that the bolt 32 which passes through block 31 does not pass centrally therethrough but upon the contrary is offset to one side thereof. Therefore by turning this block upon the bolt the block may be thrown to varying positions of adjustment to provide a rest upon which the bar 12 will engage. Thus the angle of the board 23 with respect to the angle of the transom 5 may be adjusted to fit the particular boat upon which the device is being used.

While I have referred to the element 23 as being a board, it is to be understood that it may be made of any suitable material. However I prefer to make it of relatively thick plywood so that it will conform in dimensions to the conventional sterns of small boats and therefore be adapted to receive the bracket of practically any type of small outboard motor. The brackets 9 and 10 are the only portions of the structure which are permanently attached to the boat. The bracket 9 is secured by screws 9*a* which are preferably countersunk while the bracket 10 is secured by screws 10*a*, 10*b*. The screw 10*a* secures the forward portion of the bracket to the deck 6 while the screws 10*b* fit into the upper edge of the transom 5. Thus when applying the support to a boat it is only necessary for the user to slip the forward end of the bar 12 into the forward bracket 9 and to then drop the rear portion of the bar into the bracket 10 and put the wedge plate in position. This can be done after the outboard motor has been mounted upon the board 23 so that this simple act attaches the outboard motor to the boat. While the boat may be steered by turning the outboard motor with respect to its bracket 24 in a usual and known way I may, if desired, dispose the structure herein described slightly to one side of the center of the boat and leave the conventional rudder which, is usually hung upon the rudder irons 34, in place. The boat can then be steered by its conventional rudder and tiller. In transporting the supporting device of this invention, and the outboard motor, from its place of storage to and from the boat I may utilize the shoulder engaging pad illustrated in Figs. 6 and 7. This constitutes merely a curved plate 35 having a cushioning pad 36 upon its under face and having upon its upper face the spaced studs 37 between which the bar 12 may be engaged. These studs are connected by a cap plate 38. The studs are spaced far enough apart to permit the bar 12 to fit loosely therebetween and thus the shoulder pad is permitted to find that position on the shoulder which is most comfortable to the user. It is to be understood that in use the thrust of the propeller acts against the rear face of the board 23 and that the energy is transmitted through the plates 28, block 31, bar 12 and the brackets by which the bar is carried, to the boat. After the several parts have once been adjusted to the particular boat upon which the device is being used they may be bound in such adjusted position by the tightening of the several bolts. For example the pivot bolt 30 and its nut, 30*a*, may be tightened after the block 31 is adjusted in the proper position. Thereafter the angular relation between 12 and 28 need not be disturbed. In like manner the vertical adjustment of 23 with respect to the plates 28 may be made permanent by tightening the bolts 27. In removing the structure it is only necessary to tap the wedge plate 21 endwise to free it of its engagement with the bracket 10, whereupon the bar may be lifted slightly to disengage boss 18 from the relatively shallow recess 19 and then the bar may be slipped endwise far enough to disengage the forward end of the bar from the opening 11.

As far as I am aware I am the first to thus mount an outboard motor supporting structure upon the end of an elongated bar which bar in turn engages brackets spaced in considerably separated relation upon the rear deck of a small craft of this type. It is this arrangement which distributes the strain over a considerable area. Therefore it is to be understood that the invention is not limited to the precise construction set forth but that it includes within its purview whatever changes fairly come within either the terms or the spirit of the appended claims.

Having described my invention what I claim is:

1. An outboard motor supporting structure comprising an elongated bar, a forward, boat carried, bracket into which the forward end of said bar fits, a rear, boat carried, bracket comprising a channeled member through which said bar passes, interengaging members carried by the bar and rear bracket for preventing endwise movement of the bar through said rear bracket, a closure for the top of the rear bracket for holding the bar against upward movement out of said bracket, a thrust piece dimensioned to have the conventional bracket of an outboard motor engaged therewith and means for suspending said thrust piece from the outer end of said bar.

2. A structure as recited in claim 1 wherein the suspending means comprises elements for pivotally mounting the said thrust piece with respect to the outer end of the elongated bar, and binding means for binding the thrust piece in varying positions of vertical adjustment about the pivot point and with respect to said bar.

3. A structure as recited in claim 1 wherein the holding means for holding the bar in the rear bracket comprises a wedge and ways upon the bracket in which said wedge slides, said ways being inclined to an extent to cause the wedge to move forcibly downward upon the bar and bind the same in the bracket.

4. A structure as recited in claim 1 wherein the holding means for holding the bar in the rear bracket comprises a pressure element adapted to force the bar downwardly in the bracket to hold the same against rattling.

5. In an outboard motor support of the character described, an elongated bar, a front bracket with which the forward end of the bar has rigid engagement, a rear bracket having an open top channel formed lengthwise therethrough through which the bar passes, a pressure means engaged in the bracket above said bar for forcing the bar downwardly into said bracket, interengaging means between the bracket and the bar for holding the bar against endwise movement with respect to the bracket, a pair of downwardly and rearwardly extending plates between which the rear end of said bar is pivoted the distance between such pivot point and the point of engagement of the bar in the rear bracket being very much less than the distance from said point of engagement to the forward bracket, and supporting means for an outboard motor carried by said plates.

6. In an outboard motor supporting structure of the character described the combination with an elongated bar, means for mounting said bar

upon the stern of a boat with the bar extending fore and aft over the rear portion of the deck of the boat adjacent the stern thereof and with the rear end of the bar projecting beyond the stern of the boat, a pair of downwardly and outwardly extending plates between which the rear end of said bar is pivoted and an angular block having a plurality of straight sides eccentrically pivoted and mounted between said plates and underlying said bar in a position to have its straight side engage the under side of said bar and a thrust element to which the lower outer ends of said plates are rigidly connected, said element being shaped and dimensioned to have the conventional bracket of an outboard motor engage therewith and to receive the thrust of said motor in action.

7. An outboard motor supporting structure for boats of the type comprising a transom, a coaming surrounding a cockpit and a deck extending from the transom to the coaming, said supporting structure comprising a bar of a length to extend lengthwise of the boat from the coaming to a point beyond the transom, a front bracket mounted adjacent the coaming and shaped to receive the forward end of said bar, a rear bracket having an open top channel therein dimensioned to receive said bar and secured to the deck and transom, a pressure means engaged in the bracket

above said bar for forcing the bar downwardly into said bracket, interengaging means between the bracket and the bar for holding the bar against endwise movement with respect to the bracket, a pair of downwardly and rearwardly extending plates between which the rear end of said bar is pivoted the distance between such pivot point and the point of engagement of the bar in the rear bracket being very much less than the distance from said point of engagement to the forward bracket, a thrust board dimensioned to receive the thrust from an outboard motor and to have the conventional bracket of the outboard motor engaged over the upper edge thereof and means for securing the thrust board to the lower outer ends of said plates.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,100,954	Caille	June 23, 1914
1,118,208	McLaren	Nov. 24, 1914
1,799,650	Schoenburg	Apr. 7, 1931
2,068,982	Harvey	Jan. 26, 1937