Jan. 15, 1963 L. C. MOODY 3,073,279

OUTBOARD MOTOR MOUNT

Filed Aug. 30, 1960 2 Sheets-Sheet 1

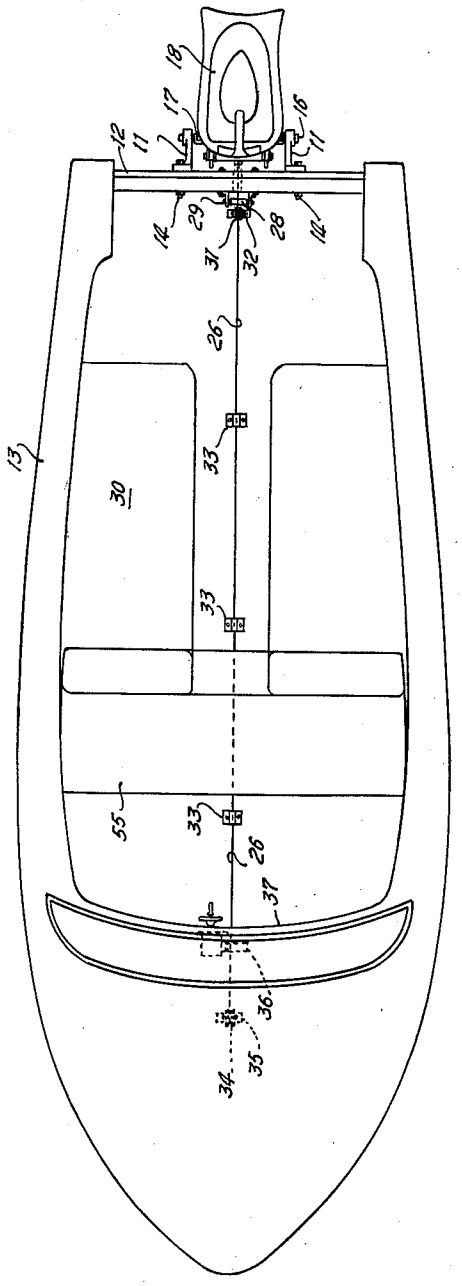

Fig. 1

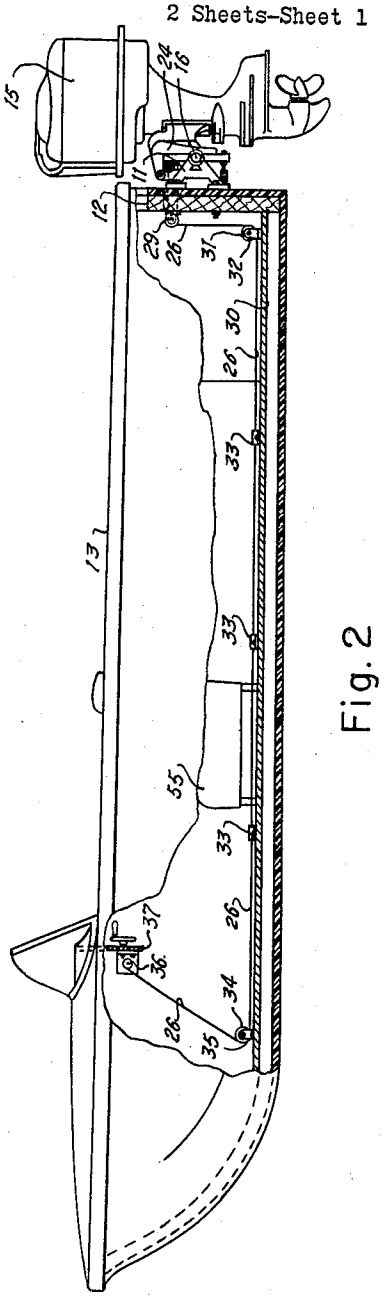

Fig. 2

INVENTOR

Lawrence C. Moody

BY Cecil L. Wood

ATTORNEY

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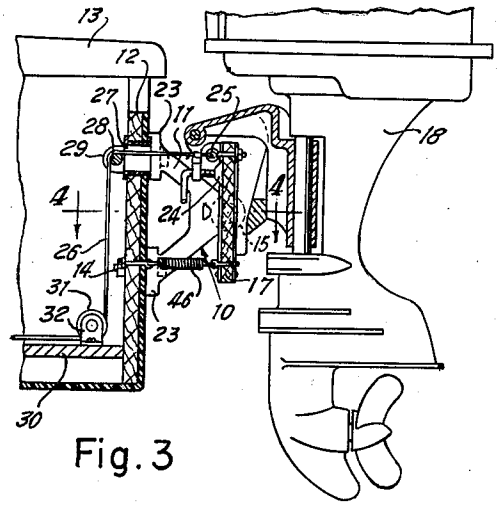

Fig. 3

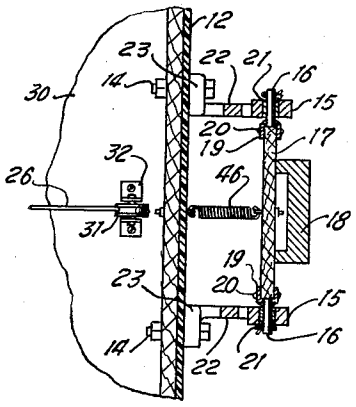

Fig. 4

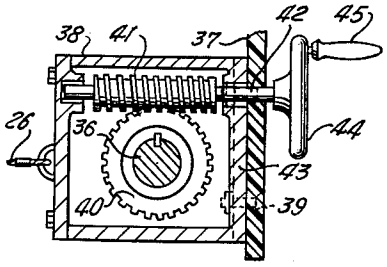

Fig. 6

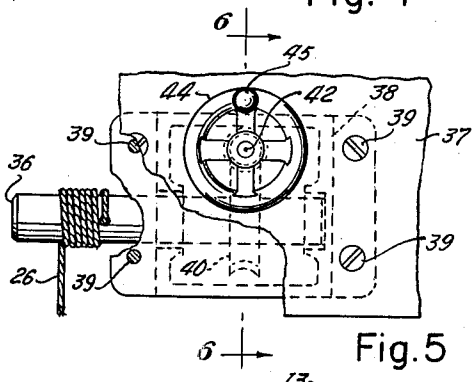

Fig. 5

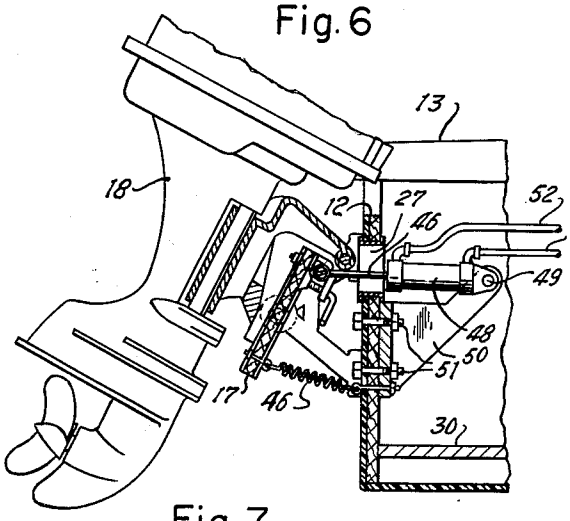

Fig. 7

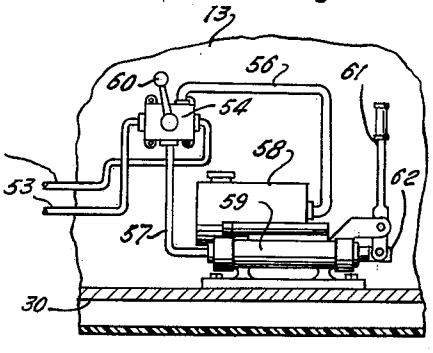

Fig. 8

INVENTOR

Lawrence C. Moody

BY Cecil L. Wood

ATTORNEY

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3,073,279

OUTBOARD MOTOR MOUNT

Lawrence C. Moody, Dallas, Tex., assignor to Herman D. Washington and Reginald Nolley, both of Dallas, Tex.

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2 Claims. (Cl. 115—41)

This invention relates to outboard motor mounting devices for boats, and it has particular reference to an outboard motor mount adapting the motor to be adjusted to a variety of angles, while in operation, by the helmsman while seated in the bow of the boat, and the principal object of the invention resides in the provision of a mounting bracket capable of attachment to the boat transom whereby the motor is pivotally supported and capable of being tilted to different angular positions.

An object of the invention is that of providing an outboard motor mount by which the boat can be guided through shallow water and over submerged obstacles without damage to the motor, yet without stopping to adjust the same to the proper angle for clearing such obstacles.

A further object of the invention resides in the provision of an outboard motor mounting bracket pivotally supported for angular adjustment in the plane of travel of the boat to which it is attached, and a control mechanism therefor in the front portion of the boat, by which the motor can be conveniently manipulated when necessary and with a minimum of effort.

Broadly, the invention contemplates the provision of apparatus by which an outboard motor can be securely attached to a boat for operation in a conventional manner while capable of being readily and easily adjusted to different operative positions and at any desired speed at which the boat is capable of traveling.

While the foregoing objects are paramount, other and lesser objects will become manifest as the description proceeds, taken in connection with the appended drawings wherein:

FIGURE 1 is a plan view of a boat showing the invention attached thereto, and showing the operating mechanism.

FIGURE 2 is a side elevational view of the invention attached to a boat, the latter being shown in partial longitudinal section, and illustrating the operating mechanism.

FIGURE 3 is a fragmentary cross-sectional illustration of the rear portion of a boat showing the invention attached, also shown in vertical section.

FIGURE 4 is a fragmentary transverse sectional view of a boat transom, on lines 4—4 of FIGURE 3, showing the invention, also in section, attached thereto.

FIGURE 5 is a fragmentary elevational view of the instrument panel of a boat showing the cable mandrel therebehind, and the mandrel wheel for operating the cable.

FIGURE 6 is a fragmentary sectional view on line 6—6 of FIGURE 5, transversely of the instrument panel of the boat and the gear housing for the cable mandrel.

FIGURE 7 is a fragmentary vertical sectional view of the boat transom, having the invention attached and also shown in section, and illustrating a hydraulic actuating device for the invention, and

FIGURE 8 is a fragmentary sectional view of a boat and schematically illustrating the hydraulic hand pump, reservoir and valve for hydraulically operating the invention.

One of the problems in the operation of small boats with outboard motors is that of moving about in shallow water or among submerged brush, stumps, and other obstacles. When the boat is beached, as often desirable in inland lakes and streams, the motor must be tilted to

raise the rudder and propeller above the bottom of the boat to prevent damage thereto.

Conventional mounting devices are rigid while the motor is hinged thereto to be tilted manually to a suitable angle and secured by a pin, or the like, when the boat is loaded for transportation on a trailer. It is an object of the invention to provide a convenient, fast and dependable means for adjusting the motor.

Referring to the drawings, the mounting bracket embodying the invention is designated generally by the numeral 10, and comprises a pair of angular frame members 11 adapted to be secured in laterally spaced relation to the transom 12 of a boat 13 by bolts 14, or other suitable device. As shown in FIGURES 2, 3 and 7 the frame members 11 are A-shaped, the angular legs of each converging outwardly to form a bearing support 15 to receive spindles 16 secured at each end of a panel 17 to which the outboard motor 18 is detachably secured.

The panel 17, while shown in FIGURES 3, 4 and 7 as being formed of wood, may obviously be formed of any suitable material. The spindles 16 are integral with channel members 19, and intermediate their ends, and the latter are secured to each end of the panel 17 by rivets or bolts 20 so that the panel 17 is capable of oscillating on a horizontal axis. A bearing 21 is provided in each bearing support 15 for each spindle 16, as shown in FIGURE 4.

Each of the frame members 11 is formed with cross members 22 to strengthen the same, and have foot members 23 through which the bolts 14 are passed.

The motor 18 is conventionally provided with a clamp 24 which is designed for attachment to the boat transom 12, means being provided in the motor for pivoting thereof on a vertical axis, as shown in FIGURES 3 and 7. The motor 18 is secured to the panel 17, which is spaced outwardly from the transom 12, in the manner shown in FIGURES 1, 2, 3 and 7, and is thus capable of being tilted on the horizontal pivot provided by the spindles 16.

Attached to the top of the panel 17, and intermediate its ends, is an eye-bolt 25 to which is connected one end of a cable 26 which extends through a lined opening 27 in the upper portion of the boat transom 12 and over a roller 28 mounted in brackets 29 interiorly of the transom 12, and downwardly to the bottom 30 of the boat 13, under a pulley 31 pivotally arranged in a bracket 32 attached to the bottom 30, thence forwardly along the latter through guides 33 to the bow of the boat 13 and about a pulley 34 pivoted in a bracket 35, also attached to the bottom 30, and upwardly to be wound upon a mandrel 36 attached to the instrument panel 37 of the boat 13, as shown in FIGURES 1 and 2.

The mandrel 36 is journalled in a gear box 38 attached by bolts 39 to the front side of the instrument panel 37, as shown in FIGURES 5 and 6, so that one end projects and to which the cable 26 is attached and wound thereon, as indicated in FIGURE 5. A worm gear 40 is rigidly secured to the mandrel 36 in the box 38 and is meshed with a worm 41 journalled in the latter transversely of the mandrel 36, as apparent in FIGURE 6.

The worm 41 has a spindle 42 on one end which extends through a wall 43 of the box 38 and the instrument panel 37 and a wheel 44 is attached to the outer end of the spindle 42 on the instrument panel 37 whereby the mandrel 36 can be rotated, as by the handle 45, to wind or unwind the cable 26 whereby to operate the motor 18 on its pivots 16. A pull spring 46 is connected at one end to the transom 12 and at its opposite end to the lower edge of the panel 17, and intermediate its ends normally biasing the latter in a vertical position, as shown in FIGURES 3 and 4, but yieldable to a pull on the cable 26.

In the modified form of the invention, shown in FIGURES 7 and 8, a hydraulic mechanism is employed for operating the motor mount. The panel 17, with its frame

members **11**, is employed in this device but is pivoted through the medium of a hydraulic plunger rod **47** hingedly connected to the panel **17** at its outer end, as shown in FIGURE 7, while its inner end is attached to a piston in a cylinder **48**. The plunger rod **47** extends through the opening **27** in the transom **12** and the opposite end of the cylinder **48** is pivoted at **49** to a bracket **50** attached to the inner surface of the transom **12** by bolts **51**.

The cylinder **48** has hydraulic lines **52** and **53** connected to each end whose opposite ends are connected through a valve **54**, attached to the boat near the helmsman's seat **55**, which in turn has conduits **56** and **57** connected, respectively, at their opposite ends to a fluid reservoir **58** and a hand pump **59**, the latter elements being secured to the bottom **30** of the boat **13**, as shown in FIGURE 8. A handle **60** is provided for operating the valve **54**, and a lever **61** is connected to the plunger **62** of the pump **59**.

The motor **18** is manipulated to different angular positions by the hydraulic mechanism by the operation of the valve **54** to admit hydraulic fluid through the conduit **53** to the cylinder **48**, to raise the motor **18** to the tilted position shown in FIGURE 7, and release the fluid through the conduit **52** to adjust the motor **18** to different angles or to its normal operating position, as shown in FIGURE 3. Pressure in the reservoir is maintained by the operation of the pump **59**.

It is obvious that other means than those illustrated and described may be employed for operating the tilting panel **17**, and if desired an electric motor may be provided

to rotate the worm **41**. By the use of either of the mechanisms shown and described the motor **18** can be adjusted as desired and held in such adjusted positions while in operation.

The invention, while here described in great detail, is capable of being modified in structure and design, by persons skilled in the art, without departing from the spirit and intent thereof or the scope of the appended claims.

What is claimed is:

1. In a mounting bracket for outboard motors, in combination with a boat having a transom, a pair of spaced frame members attached to said transom and extending rearwardly therefrom, a panel pivoted intermediate its top and bottom edges between said frame members and capable of being tilted to different angles from a vertical plane, an outboard motor clamped to the top edge of said panel, means in said boat connected to the top of said panel and operable from the bow thereof to tilt the said panel and said outboard motor, and means normally biasing said panel to a vertical position on its said pivots.

2. In an adjustable outboard motor support for boats, as described in claim 1 wherein the tilting means for said panel and said motor comprises a hydraulic mechanism.

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