

Nov. 29, 1966

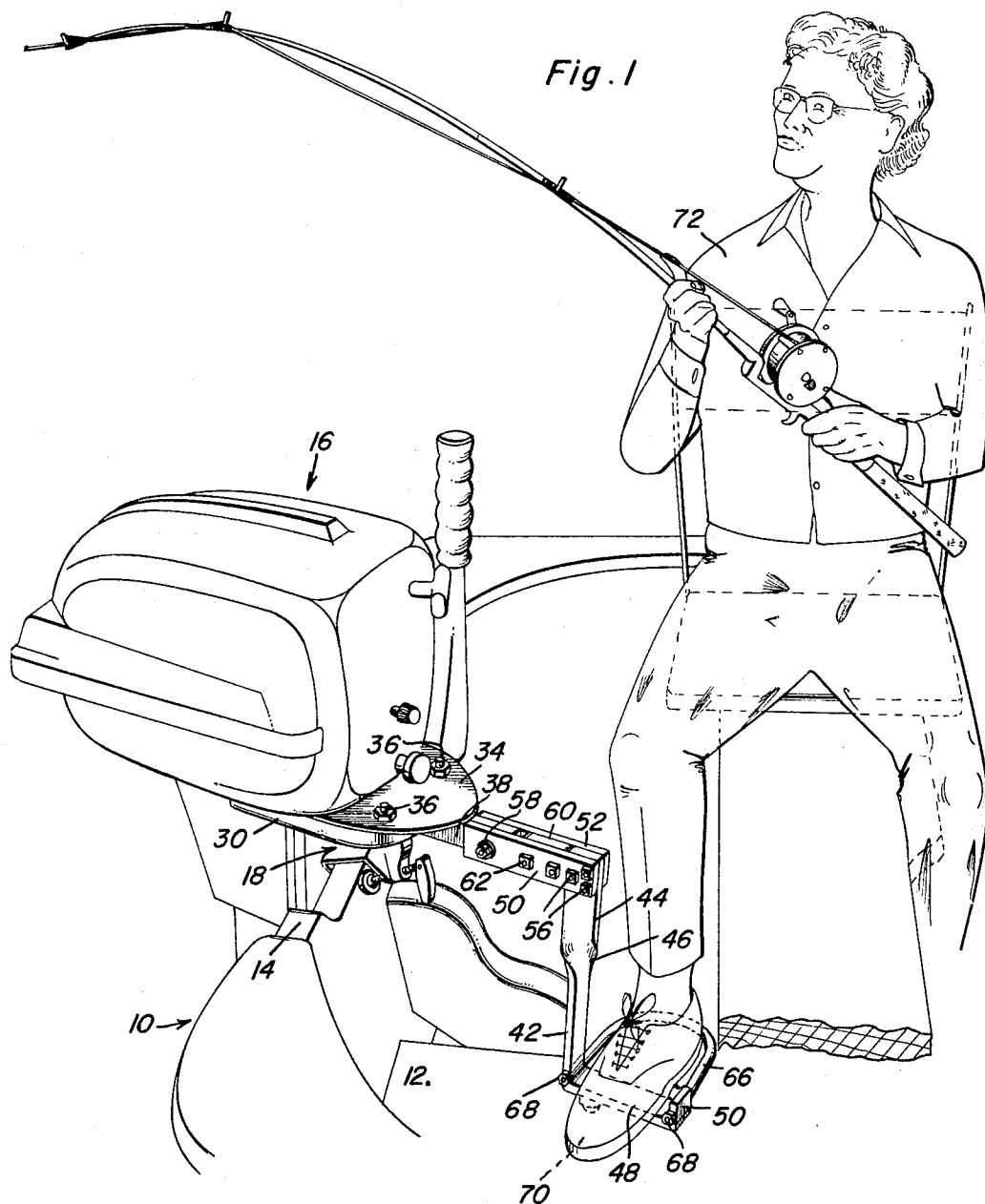
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3,288,099

FOOT STEERING CONTROL FOR OUTBOARD MOTORS

Filed March 31, 1965

2 Sheets-Sheet 1



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Fig. 2

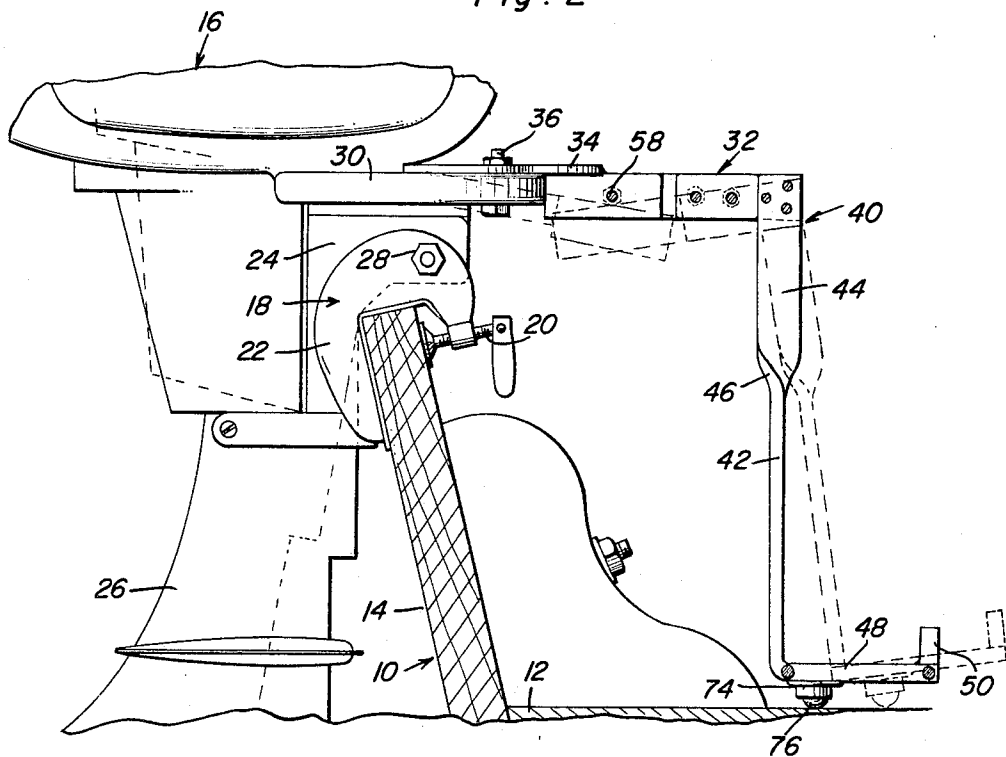


Fig. 3

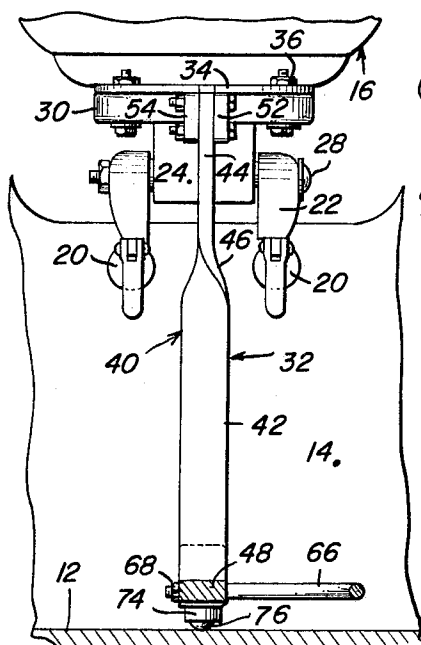
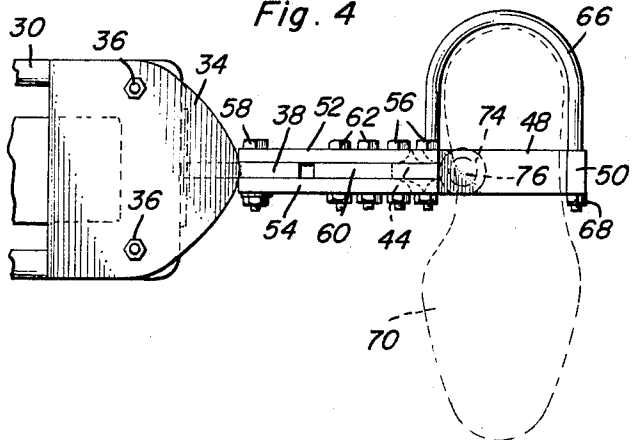


Fig. 4



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3,288,099 FOOT STEERING CONTROL FOR OUTBOARD MOTORS

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Filed Mar. 31, 1965, Ser. No. 444,243
8 Claims. (Cl. 114-153)

This invention relates to outboard motor boats and more particularly to a foot steering control for pivoting the outboard motor of such a boat.

A primary object of the instant invention is to provide a foot steering bracket adapted to be attached to an outboard motor and including means engageable by the foot of an operator of the associated outboard motor boat and operable to pivot the outboard motor in a manner to steer the boat.

A further object of the instant invention is to provide a steering bracket for an outboard motor including anti-friction boat bottom engaging means thereon for engagement with the bottom of the associated boat.

A still further object of the instant invention is to provide a steering bracket for an outboard motor adapted to be engaged by one foot of the operator of the boat for the purpose of steering the boat and which will conform to conventional forms of manufacture, be of simple construction, and easy to use so as to provide a device that will be economically feasible, long-lasting and relatively trouble free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a fragmentary perspective view of the interior of an outboard motor boat illustrating the foot steering control of the instant invention mounted on an associated outboard motor for operation thereof by an operator;

FIGURE 2 is a fragmentary enlarged longitudinal vertical sectional view of the assembly illustrated in FIGURE 1 and clearly disclosing the manner in which the steering bracket is operatively connected to the associated outboard motor;

FIGURE 3 is a fragmentary front elevational view of the assembly illustrated in FIGURE 2 with the stirrup portion of the steering bracket illustrated in vertical sections; and

FIGURE 4 is a fragmentary top plan view of the assembly illustrated in FIGURE 3 with arrows indicating the manner of movement of the stirrup portion of the steering foot control.

Referring now more specifically to the drawings the numeral 10 generally designates a conventional form of outboard motor boat including a bottom 12 and a transom 14. A conventional outboard motor generally referred to by the reference numeral 16 is mounted on the transom 14 in any conventional manner by means of a clamp assembly generally referred to by the reference numeral 18 and including threaded clamping screws 20 for clamping engagement with the transom 14. The clamp assembly 18 includes a first section 22 from which the clamping screws 20 are threadably supported and a second section 24 from which the power leg 26 of the outboard motor 16 is pivotally supported for movement about an upstanding axis relative to the second section 24. The second section 24 is pivotally supported from the first section 22 means of a pivot fastener 28 for rotation about a horizontal axis relative to be first section 22.

In addition to being provided with the clamp assembly 18, the outboard motor 16 includes a forward projecting

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and rearwardly opening generally U-shaped bar or handle 30 to which the foot steering control of the instant invention is operatively connected, the steering control being designated in general by the reference numeral 32.

The foot steering control 32 includes a mounting plate 34 which is secured to and overlies the forwardly projecting portion of the handle 34. Any form of suitable fasteners 36 may be utilized to secure the mounting plate 34 to the handle 30 and it may be seen from FIGURE 4 of the drawings that the mounting plate or bracket 34 includes an underslung and forwardly projecting bar 38 which is fixedly secured thereto.

The steering control 32 includes a generally Z-shaped steering arm referred to in general by the reference numeral 40 and including a first J-shaped portion 42 including a bar-like upstanding leg 44 twisted 90° as at 46 and supporting a laterally projecting short leg 48 at its lower end whose free end portion is turned up as at 50. The upper end of the long leg 44 is secured between corresponding ends of a pair of laterally projecting plates 52 and 54 by means of fasteners 56 and the other pair of corresponding ends of the plates 52 and 54 receive therebetween and are pivotally secured to the forward end portion of the bar 38 by means of a pivot fastener 58. In addition, the upper end of the long leg 44 includes a laterally projecting plate portion 60 which is rigidly secured to the long leg 44 and which is also sandwiched between the side plates 52 and 54 and secured to the latter by means of suitable fasteners 62.

A generally U-shaped bolt 66 has its opposite ends secured through the lower end of the long leg 44 and the lower end of the upturned portion 50 by means of suitable fasteners 68 and cooperates with the short leg 48 to provide a cradle for receiving the foot 70 of the operator 72 of the outboard motor 16. Still further, the underside of the short leg 48 has a bearing cage 74 secured thereon for a single ball bearing 76 which projects below the cage 74 and is disposed for rolling contacting engagement with the bottom 12 of the boat 10.

In operation, it may best be seen from a comparison of FIGURES 1 and 2 of the drawings that the operator 72 may place her foot 66 on the short leg 48 and within the confines of the U-shaped bolt 66 with the former supporting the weight of her leg. In order to steer the outboard motor 16, it is merely necessary for the operator 72 to move her foot in the direction illustrated by the arrows in FIGURE 4 of the drawings. In addition, inasmuch as the Z-shaped arm 42 is pivotally secured to the bar 38 by means of the pivot fastener 58, the inclination of the outboard motor 10 about the horizontal axis defined by the pivot fastener 28 may be adjusted in the conventional manner even though the ball bearing 76 remains in contact with the flooring 12. Still further, it will be appreciated that if the outboard motor 16 is sufficiently tilted about its horizontal axis of rotation the control arm 42 will oscillate about the axis of rotation defined by the pivot fastener 58 as the outboard motor 16 is oscillated about its upstanding axis of rotation in the manner indicated by the arrows in FIGURE 4 of the drawings. Therefore, it may be seen that the horizontal axis of rotation defined by the pivot fastener 58 and the spherical anti-friction member defined by the ball bearing 76 are very important features of the invention.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and

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equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is, as follows:

1. In combination with an outboard motor of the type including a two section mounting clamp assembly with one section pivoted to the outboard motor for rotation about an upstanding axis and the other section pivotally supported from said one section for rotation about a horizontal axis, said other section including means adapted to be supported from the transom of a boat, a foot steering control including a mounting portion secured to a forward portion of said outboard motor, a steering arm assembly including an upstanding leg means freely pivotally mounted at its upper end portion to said mounting portion for rotation about a generally horizontal disposed axis extending transversely of said motor and terminating at its lower end portion in a foot engageable portion adapted to be engaged by one foot of an operator of said boat and to swing through a horizontal plane about said upstanding axis as said motor is rotated about said upstanding axis.

2. A steering arm assembly for an outboard motor of the type including a two section mounting clamp assembly with one section pivoted to the outboard motor for rotation about an upstanding axis and the other section pivotally supported from said one section for rotation about a horizontal axis, said other section including means adapted to be supported from the transom of a boat, said steering arm assembly including a mounting portion adapted to be secured to a forward portion of said motor, an upstanding leg means freely pivotally mounted at its upper end portion to said mounting portion for rotation about a generally horizontally disposed axis extending transversely of said motor and terminating

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at its lower end portion in a foot engageable portion adapted to be engaged by one foot of an operator of said boat and to swing through a horizontal plane about said upstanding axis as said motor is rotated about said upstanding axis.

3. The combination of claim 1 wherein said foot engageable portion includes a generally horizontally disposed leg.

4. The combination of claim 3 wherein said horizontally disposed leg includes depending anti-friction abutment means adapted to engage the upper surfaces of the floor of said boat.

5. The combination of claim 4 wherein said abutment means comprises a captive ball bearing.

6. The combination of claim 1 wherein said foot engageable portion includes a projecting and generally horizontally disposed leg, said horizontally disposed leg including a laterally projecting generally U-shaped member opening theretoward and supported therefrom.

7. The combination of claim 6 wherein said horizontally disposed leg includes depending anti-friction abutment means adapted to engage the upper surfaces of the floor of said boat.

8. The combination of claim 7 wherein said abutment means comprises a captive ball bearing.

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