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OUTBOARD MOTOR TILTING DEVICE

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Fig.1

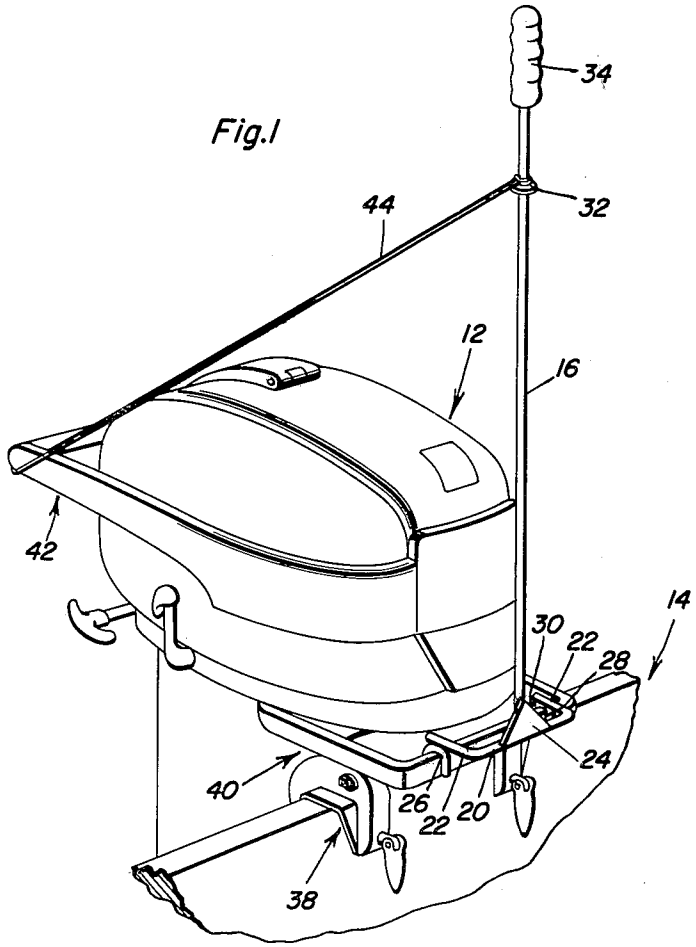


Fig.3

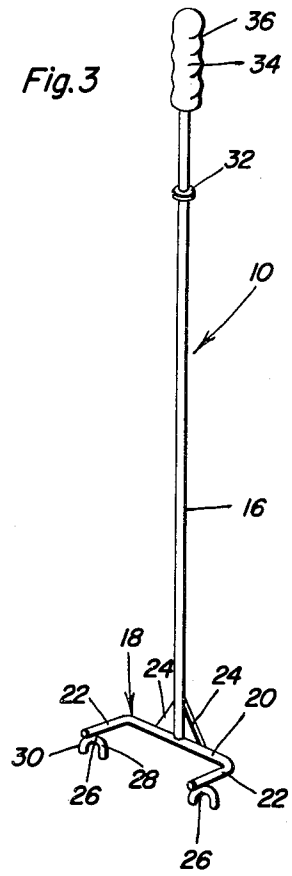
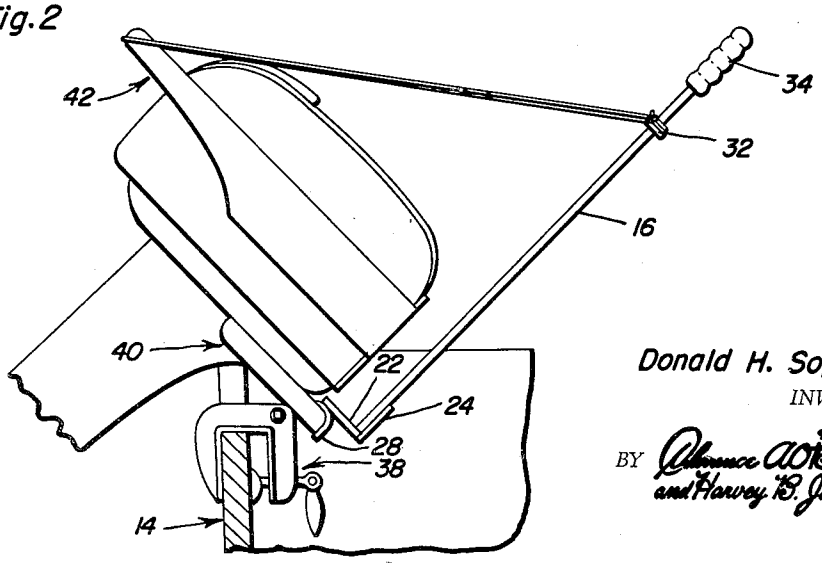


Fig.2



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OUTBOARD MOTOR TILTING DEVICE

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7 Claims. (Cl. 115—17)

This invention relates generally to apparatus for use with outboard motors, and more particularly to a tilting device therefor.

With the large amount of leisure time now available to most persons in this country, the sport of boating has become increasingly popular. However, outboard motors are cumbersome to handle, and sometimes very difficult to tilt when mounted on the transom of a boat. Certain people because of age, size, or physical impairment are unable to tilt large motors as they are presently constructed. Therefore, it is the primary object of this invention to provide a simple and readily attachable outboard motor tilting device for facilitating the tilting of large outboard motors, without the expenditure of much energy.

Another object of this invention is to provide a device of the character described which may be quickly and easily attached and detached to the conventional type of outboard motors, and may be easily stored within the boat when not in use.

A further object of this invention is to provide a device of the character described, which is so adapted, that this tilting operation of the outboard motor, may be performed by a person located in any part of the boat.

Still a further object of this invention is to provide a device which eliminates the necessity for leaning over the transom of a boat in rough water when it is necessary to tilt the motor.

An even further object of this invention is to provide a device of the character described wherein the outboard motors may be easily tilted even when the lower unit of the motor is stuck in mud or sand.

Yet a further object of this invention is to provide a simple and inexpensive device and yet one which is exceedingly effective for the purpose for which it is designed.

This invention contemplates the use of an elongated handle having hooks on the lower end thereof, which are easily attached to and detachable from the forward tilting handle of an outboard motor. A piece of wire or string is attached to the upper portion of the elongated handle, and disposed about the rearward tilting handle. Then, by grasping the upper end of the elongated handle and applying a pressure toward the forward part of the boat, the outboard motor may be very easily and simply tilted.

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 perspective view of the device comprising the present invention, illustrating the same as attached to a conventional type of outboard motor, which is in turn mounted on the transom of a boat;

Figure 2 is a side elevational view of the apparatus

illustrated in Figure 1, showing the same in the tilted position; and

Figure 3 is a perspective view of the tilting device per se.

Referring now more specifically to the drawings, the numeral **10** generally designates the tilting device comprising the present invention, which is to be connected to various parts of a conventional type of outboard motor **12**, which is in turn attached to the transom **14** of a boat.

The tilting device **10**, is constructed of an elongated rod **16** of substantially uniform diameter throughout. On the lower end thereof, and disposed transversely thereto, is a U-shaped bracket **18**. This U-shaped bracket **18**, is constructed of a bight portion **20**, which is connected to the lower end of rod **16**, and outwardly projecting legs **22**. Reinforcing triangular plate **24** is disposed between rod **16** and bight portion **20**, and it is to be noted that a plurality of triangular plates **24** may be used. Attached to the outer ends of legs **22**, are open loops **26**, having rearward legs **28** which extend downwardly further than forward legs **30**. Near the upper end of rod **16**, is rigidly connected a washer **32**. At the uppermost portion of rod **16** is connected a handle grip **34**, that has indentations **36** thereon so as to more comfortably accommodate the fingers.

The conventional type of outboard motor **12**, has detachable clamps **38** affixed thereto, which adapt the motor to be connected to the transom **14** of a boat. These conventional types of motors **12**, have a forward tilting or carrying handle **40** disposed immediately above the clamp **38**, and a rearward tilting handle **42** projecting in the opposite direction from handle **40**, and disposed at a higher vertical point thereon.

When it is desired to tilt the motor **12**, it is merely necessary for the open hooks **26** to be engaged on the bight portion of forward tilting handle **40**, with the rod **16** projecting upwardly therefrom. A cable **44** is formed in a loop, and then tied about rod **16**, above washer **32** whereby the cable **44** will not be able to slide down on rod **16**, since it is prevented from doing so by the washer **32**. This cable **44** is engaged about rearward tilting handle **42**. Then, the handle **34** is grasped, and by pulling forwardly thereon, the rod **16** provides a large lever arm so that but a small force is required to overcome the motor moment which is counterclockwise as viewed in Figure 2. Of course, the cable **44** disposed about handle **42**, applies a force to the motor and because of the mechanical advantage gained by the long moment arm of rod **16**, a small force is needed to overcome the large weight of motor **12**.

By connecting a rope to the upper portion of rod **16**, above washer **32**, it may be seen that from any position within the boat, by a simple tug on the rope, the motor may be pulled forwardly. Thus, the beaching of a boat is simplified since the operator is able to remain in the forward portion of a boat while tilting the motor at the desired time.

It may now be seen that there has been herein shown and described a new and improved type of motor tilting device, which will be found to be extremely useful in tilting heavy motors which have heretofore been a problem to persons who because of age, size, or physical impairment have previously had a difficult time in tilting motors.

The foregoing is considered as illustrative only of the principles of the invention. Further, since nermous 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 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 having a forward tilting handle and a rearward tilting handle, an outboard motor tilting device comprising an elongated rod, means on one end of said rod adapted to detachably connecting the latter to said forward tilting handle, and means secured to the other end of said rod releasably connected between said rod and the rear tilting handle, said last mentioned two means cooperating to retain said rod in a substantially upright position ready for instant use when the latter is not being used, said releasable connection means including a cable having one end connected to said rod near its upper end, a stop element fixed to said rod near the upper end for preventing said cable from sliding therebelow, and a handle on the uppermost end of said rod, said detachable means including a bracket member fixed on the bottom end of said rod, said bracket member comprising a transversely extending element having a downwardly opening U-shaped retaining element on each end thereof embracing said forward tilting handle from above.

2. In combination with an outboard motor of the type having a forward tilting handle and a rearward tilting handle, an outboard motor tilting device comprising an elongated rod, means on one end of said rod adapted to detachably connecting the latter to said forward tilting handle, and means secured to the other end of said rod releasably connected between said rod and the rear tilting handle, said last mentioned two means cooperating to retain said rod in a substantially upright position ready for instant use when the latter is not being used, said releasable connection means including a cable having one end connected to said rod near its upper end, a stop element fixed to said rod near the upper end for preventing said cable from sliding therebelow, and a handle on the uppermost end of said rod, said detachable means including a bracket member fixed on the bottom end of said rod, said bracket member comprising a transversely extending element having a downwardly opening U-shaped retaining element on each end thereof embracing said forward tilting handle from above, said transversely extending element being substantially

U-shaped and having a bight portion with a leg extending at substantially right angles thereto on each end thereof, said retaining elements being carried by the free ends of said legs.

3. For use in connection with a tiltable outboard motor of the type including a forward tilting handle and a rear tilting handle, an outboard motor tilting device comprising an elongated rod, means on the lower end portion of said rod adapting it for detachable connection to said forward tilting handle with said rod disposed in an upstanding position and projecting above said tilting handle, said tilting handle including a transversely extending horizontally disposed bight portion, said connecting means including means for engaging said bight portion at spaced points longitudinally therealong on opposite sides of said rod, means on the upper end portion of said rod for a releasable connection with said rear tilting handle and maintaining said rod in an upstanding position against movement of the upper end of said rod in at least forward direction away from said rear tilting handle whereby as the upper end of said rod is tilted forwardly said motor will also be tilted forwardly.

4. The combination of claim 3 wherein said releasable connection means includes an elongated tensioning member having one end connected to said rod and the other end adapted for connection with said rear tilting handle.

5. The combination of claim 3 including a handle on the upper end of said rod.

6. The combination of claim 3 wherein said detachable means includes a bracket member fixed on the bottom end of said rod, said bracket member comprising a transversely extending element including a downwardly opening U-shaped retaining element adapted to embrace said forward tilting handle from above.

7. The combination of claim 6 wherein said retaining element is offset rearwardly of said rod.

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