Feb. 2, 1960 T. R. HOYT 2,923,269

MARINE OUTBOARD MOTOR HOIST AND PROTECTOR

Filed June 10, 1957

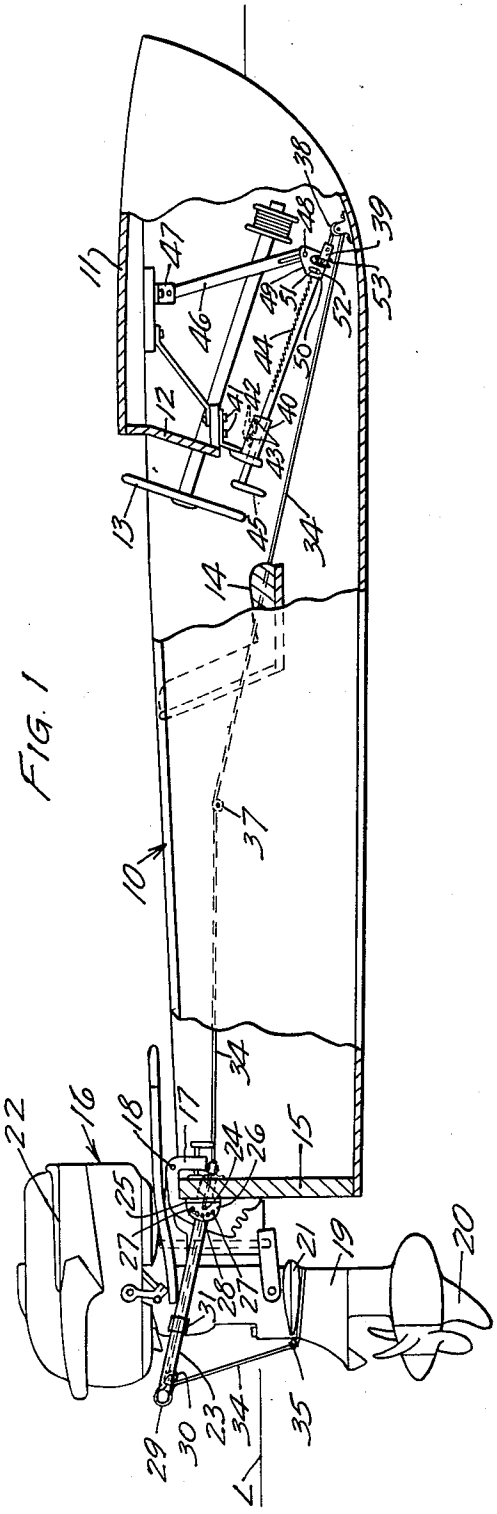


FIG. 1

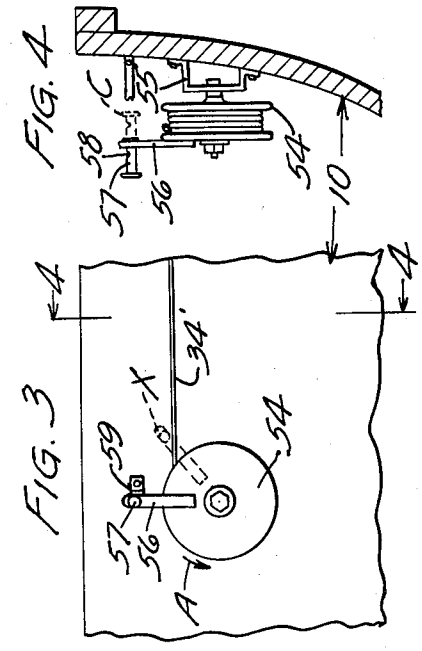


FIG. 4

FIG. 3

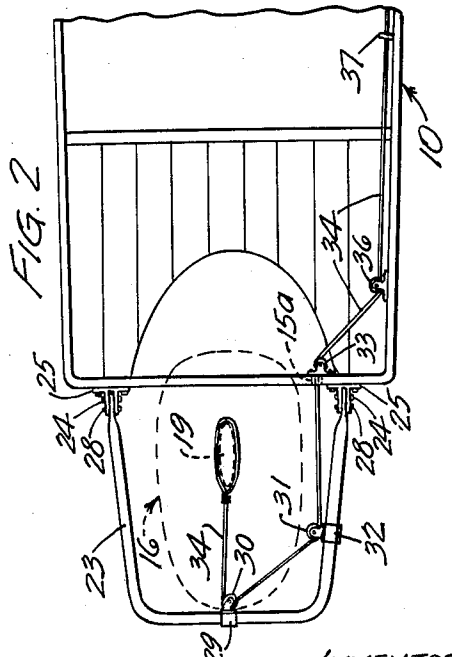


FIG. 2

INVENTOR
THOMAS R. HOYT

Williamson, Schroeder, Adams & Meyers
ATTORNEYS

United States Patent Office 2,923,269 Patented Feb. 2, 1960

2,923,269

MARINE OUTBOARD MOTOR HOIST AND PROTECTOR

Thomas R. Hoyt, Minneapolis, Minn.

Application June 10, 1957, Serial No. 664,659

6 Claims. (Cl. 115—41)

This invention relates to an attachment for outboard motor boats.

Outboard motor boats are commonly controlled from a position adjacent the bow of the boat. A steering wheel is provided for turning the motor and a throttle is mounted adjacent the steering wheel for controlling the speed of the motor.

In properly operating an outboard motor, it is frequently desirable to swing the depending drive shaft housing and propeller up toward the surface of the water. This is frequently done when landing the boat at a shallow beach, and also when passing through a bed of weeds at the surface of the water so as to prevent the propeller and rudder from being damaged or entangled in debris.

An object of my invention is the provision of new and improved apparatus of simple and inexpensive construction and operation for tilting up an outboard motor from a remote position in relation to the stern of the boat.

Another object of my invention is the provision of an attachment for an outboard motor boat which protects the motor from being bumped by other boats and the like at a pier and which facilitates tilting of the motor up to lift the drive shaft housing and propeller to the top of the water to prevent damage thereto.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to the same or similar parts throughout the several views and in which:

Fig. 1 is a side elevation view partly in section of an outboard motor boat with the attachment comprising the present invention thereon;

Fig. 2 is a detail top plan view of the rear or stern portion of the boat and attachment and showing the motor in dotted lines;

Fig. 3 shows a slightly modified form of a portion of the attachment and is a detail elevation view of the inside of the boat; and

Fig. 4 is a detail section view taken substantially at 4—4 in Fig. 3.

One form of the present invention is shown in Figs. 1 and 2 and is completely described herein. The motor boat 10 is of a generally conventional type, and in the form shown, the boat is provided with a forward deck 11, a control panel 12, a steering wheel 13 and an operator's seat 14 disposed well forwardly of the transom. A substantially conventional outboard motor indicated in general by the numeral 16 is secured to the transom 15 by means of a clamping bracket 17 which is swingably connected by a shaft 18 to the motor frame to facilitate tilting upwardly of the drive shaft housing 19 and the rudder 20 in the conventional manner. The drive shaft housing may have the conventional anti-cavitation blade 21 affixed thereon, the cylinder housing 22 is disposed above the level of the gunwale.

The attachment includes an elongated rigid and generally U-shaped frame element 23 having the opposite ends thereof disposed on opposite sides of the motor and

swingably connected by means of pivots 24 extending through aligned apertures in the ends of the frame element 23 and in bifurcated brackets 25 which are affixed as by bolts to the transom 15 of the boat. The spaced pivot-mounting ears 26 of the bracket 25 are generally semi-circular in shape and are provided with a plurality of arcuately spaced apertures 27 which are disposed along the outer arcuate edge of the ears and which are adapted to receive a pin 28 which extends through another aperture in the corresponding end of the frame element 23 for securing the frame element in the desired position. Normally the frame element 23 extends rearwardly from the transom 15 in a generally horizontal direction, but it is to be understood that the position of the frame element 23 may vary with the size of motor used on the boat.

As best seen in Fig. 2 the frame element has a bracket 29 at its rearmost portion which mounts a pulley 30. Another pulley 31 is mounted on a bracket 32 which is secured to the frame element 23 at one side of the motor 16. An aperture 15*a* is provided in the transom 15 and another pulley 33 is mounted on the inner side of the transom immediately adjacent the aperture 15*a*.

A cable 34 is attached by any suitable means to the depending drive shaft housing 19 of the motor 16 at a position below the water line L and in the form shown, the cable 34 is wrapped around the housing 19 and secured back on itself by a suitable fastener 35. Cable 34 extends rearwardly and upwardly from the housing 19 and is trained over the pulleys 30 and 34 and is threaded through the aperture 15*a* in the transom and over the pulley 33.

Means are provided at a position remote from the stern or transom of the boat and adjacent the instrument panel 12 or cockpit of the boat for controlling the tension on cable 34. To this end, a pulley 36 and a number of eyelets 37 are secured to the side of the boat for guiding the cable 34 forwardly therealong. Cable 34 is trained over another pulley 38 which is secured to the bow portion of the boat, and is terminated onto a control rod 39. The control rod 39 is longitudinally slidably carried in a mounting bracket 40 which is affixed as by bolts 41 to the frame of the instrument panel 12. Mounting 40 carries a pair of spring biased ratchet pawls 42 on pins 43 for engaging the notches or teeth 44 in the rod 39 when the rod is pulled rearwardly through the mounting 40. Rod 39 has a handle 45 on the rear end thereof. A control mechanism is connected between the front end of the control rod 39 and the frame of the boat, and in the form shown, such means include a swingable link 46 secured to the boat frame by means of a bracket 47 and swingably connected at its lower end by means of a pivot 48 to a bracket 49 carrying a rod-mounting sleeve 50 having a transverse slot 51 therein which receives a pin 52 extending through the rod 39 to limit the rotation of the rod 39. A coil spring 53 is connected with the rod 39 and the bracket 49 to turn the rod 39 back to its normal position. The rod 39, after having been pulled rearwardly and locked by the cooperating ratchet pawls 42 and the teeth 44, will be turned through approximately 90 degrees to shift the teeth 44 out of alignment with the pawls 42 and thereby permit the rod 39 to return to the normal position shown.

In operation, the boat will be controlled from the operator's seat 14. When it is desired to tilt up the propeller and drive shaft housing of the motor, the handle 45 will be pulled to tension the cable 34 and cause the lower end portion of the drive shaft housing 19 to be swung upwardly toward the rear portion of the frame element 23 or toward the pulley 30. The drive shaft housing 19 may engage the frame element 23 and the upward swing-

ing of the drive shaft housing and propeller is thereby limited. By adjusting the orientation of the frame element 23, that is, by removing the pin 28 and swinging the frame element 23 upwardly or downwardly until one of the other apertures 27 is in alignment with the corresponding aperture in the frame element, the upward limit of swinging of the propeller and driving shaft housing 19 of the motor may be adjusted. It is normally desirable to adjust the position of the frame element 23 so that the motor will swing downwardly again by gravity when the tension is released from the cable 34. For most purposes, wherein it is desired to protect the propeller and rudder from being damaged or entangled with debris or the like, it is only necessary to raise the propeller to the approximate level of the bottom of the boat.

It will be noted that the drive shaft housing 19 and the propeller will easily pass upwardly through the frame element 23 when it is desired to move the motor from the boat. It should also be noted that some types of outboard motors employ a latching mechanism which must be released in order to swing the drive shaft housing and propeller upwardly. In such types of motors, the cable 34 may be trained over the release mechanism to operate the same when tension is applied on the cable, and the cable will be pulled further to raise the propeller and drive shaft housing toward the surface of the water.

In the form of the invention shown in Figs. 3 and 4, the cable 34' is wound over a drum 54 which is rotatably mounted on a bracket 55 on the side of the boat hull. A lever arm 56 is affixed to the drum 54 and has a handle 57 slidably mounted for movement into the dotted position C shown in Fig. 4. The handle 57 may have a cable-receiving notch 58 therein for purposes hereinafter described. A stop member 59 may be affixed to the side of the boat to limit the clockwise rotation of the drum 54. When the drive shaft housing and propeller of the motor are to be tilted upwardly the handle and drum are rotated in the direction of arrow A and when approximately a three-quarter turn is made, the handle 57 is shifted into the dotted position C to cause the cable to lie in a notch 58 in substantially the dotted position X shown in Fig. 3. The drum is of such size as to cause this three-quarter turn to pull the motor upwardly toward the surface through the desired distance.

It should be recognized that the proportions of the various portions of the bar 23 may be changed to conform to boats of different sizes and motors of different types. It may also be desirable that the bar 23 should accommodate two motors on the stern of the boat.

It will be seen that I have provided a new and improved attachment for an outboard motor boat which provides for protection of the motor from possible damage due to such causes as bumping of the motor by other boats while stored at a pier or the like and also due to such causes as the motor engaging or becoming entangled in debris in shallow areas of a lake or in weed patches or the like by providing for ready and easy upward tilting of the propeller and drive shaft housing.

It will, of course, be understood that various changes may be made in the form, detail, arrangement and proportion of the parts without departing from the scope of my invention which consists of the matter described herein and set forth in the appended claims.

What I claim is:

1. An attachment for a boat adapted to be driven by an outboard motor, said attachment comprising a rigid frame element secured to and extending rearwardly from the stern of the boat above the water line and having an outer portion adapted to be positioned rearwardly of the motor, a cable-guide on the outer portion of the frame element, a cable attached to the depending drive shaft housing of the outboard motor and extending rearwardly and upwardly therefrom to said cable guide, the cable being trained over the cable guide and then forwardly into the boat, releasable means tensioning the cable from a position in the boat remote from the stern thereof whereby to tilt up the depending drive shaft housing of the motor, and means guiding the cable forwardly through the boat.

2. An attachment for a boat adapted to be driven by an outboard motor, said attachment comprising a rigid and generally U-shaped and horizontally oriented frame element having the opposite ends thereof spaced from each other and secured to the stern of the boat above the water line, and said frame element also having an intermediate portion adapted to be positioned rearwardly of the motor for confining the same to prevent the motor from being damaged due to impact by other boats and the like, a cable guide on the rearwardly extending intermediate portion of the frame element, a cable attached to the depending drive shaft housing of the outboard motor and extending upwardly and rearwardly therefrom to said cable guide, the cable being trained over the cable guide and then forwardly into the boat, releasable means tensioning the cable from a position in the boat remote from the stern thereof whereby to tilt up the depending drive shaft housing of the motor, and means guilding the cable forwardly through the boat.

3. The invention set forth in claim 2 and including bracket means fixed to the stern of the boat and swingably mounting the opposite ends of the frame element for movement about a horizontal axis, and a multi-position pin and aperture connected between the bracket means and the frame element whereby to hold the frame element in a desired position relative to the sterns of various boats and relative to various motors applicable to such boats.

4. An attachment for a boat adapted to be driven by an outboard motor, said attachment comprising a rigid frame element secured to and extending rearwardly from the stern of the boat above the water line and having an outer portion adapted to be positioned rearwardly of the motor, a cable guide on the outer portion of the frame element, a cable attached to the depending drive shaft housing of the outboard motor and extending upwardly and rearwardly therefrom to said cable guide, the cable being trained over the cable guide and then forwardly into the boat, a slidable cable-tensioning rod extending in a generally fore and aft direction in the boat and having a control handle on the rear end thereof, a rod mounting affixed to the boat and guiding the rod for fore and aft sliding movement, releasable means securing the rod in a predetermined position relative to the mounting, a cable pulley fixed to the boat in alignment with and forwardly of the front end of the rod, and said cable being trained over said pulley and secured to the rod to be tensioned by fore and aft shifting of the rod in the mounting.

5. An attachment for a boat adapted to be driven by an outboard motor, said attachment comprising a rigid and generally U-shaped and horizontally oriented frame element having the opposite ends thereof spaced from each other and disposed and adapted for attachment to the stern of the boat on opposite sides of the motor, the frame element generally encircling the rear and sides of the motor and being disposed outwardly therefrom to prevent the motor from being bumped and damaged by other boats and the like, a pulley secured on the frame element and adjacent the rearmost portion thereof to be disposed rearwardly of the motor, a cable secured to the drive shaft housing of the motor below the water line and extending upwardly and rearwardly therefrom to said pulley, the cable being trained over the pulley then forwardly into the boat, means guiding the cable forwardly through the boat, and releasable cable-tensioning means in the boat and connected with the cable whereby to tilt up the depending drive shaft housing of the motor when the cable is pulled.

6. The combination with a boat and an outboard motor on the stern of the boat, of an attachment comprising a

rigid and generally U-shaped and horizontally oriented frame element having transversely spaced forwardly projecting ends secured to the stern of the boat on opposite sides of the motor, said frame element extending rearwardly from the motor and generally encircling the rear and sides of the motor to prevent the motor from being bumped and damaged by other boats and the like, a pulley on the frame element adjacent the rearmost portion thereof and spaced from the motor in a rearward direction, a cable secured to the drive shaft housing of the outboard motor below the water line and extending upwardly and rearwardly therefrom to said pulley, the cable being trained over the pulley and then forwardly

into the boat, means guiding the cable forwardly through the boat, and releasable cable-tensioning means in the boat and connected with the cable whereby to tilt up the depending drive shaft housing of the motor when the cable is pulled.

References Cited in the file of this patent

UNITED STATES PATENTS

1,845,712 Jacques ---------- Feb. 16, 1932

FOREIGN PATENTS

505,852 Great Britain ---------- May 17, 1939