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OUTBOARD MOTOR LIFTING DEVICE

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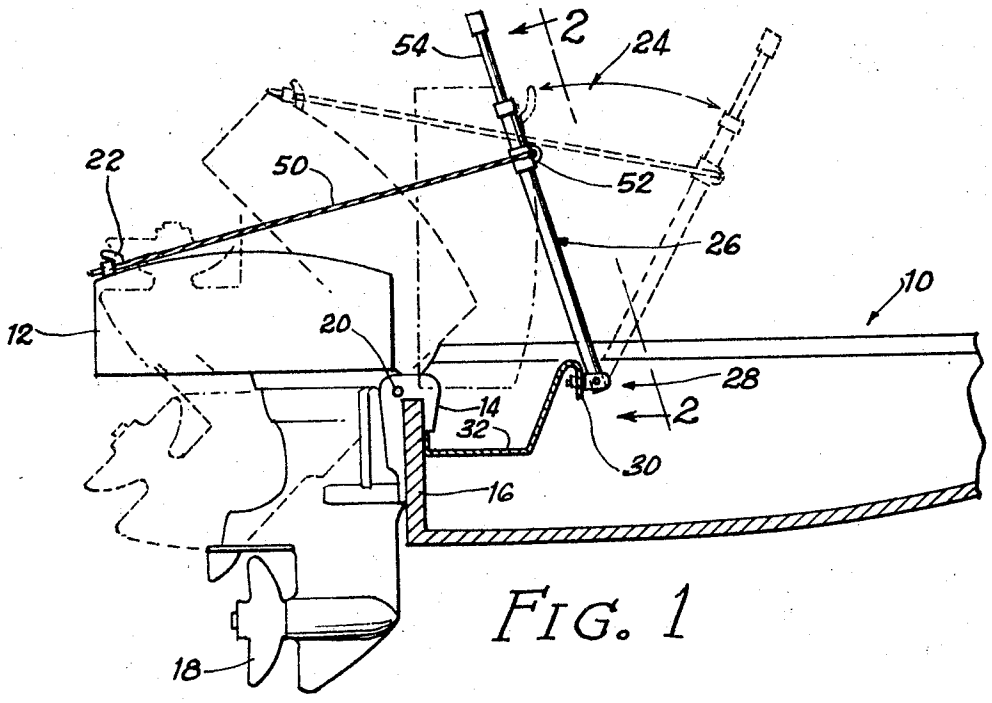


FIG. 1

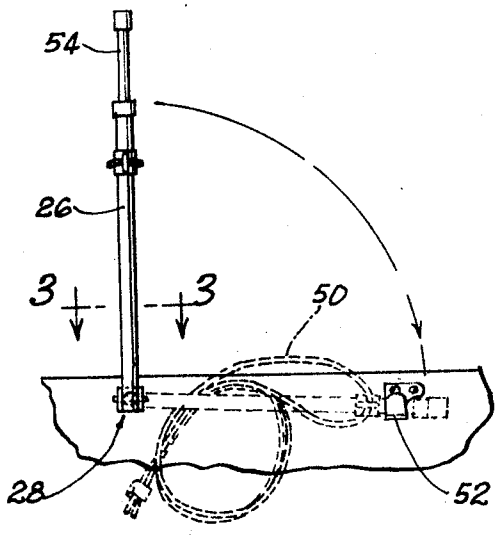


FIG. 2

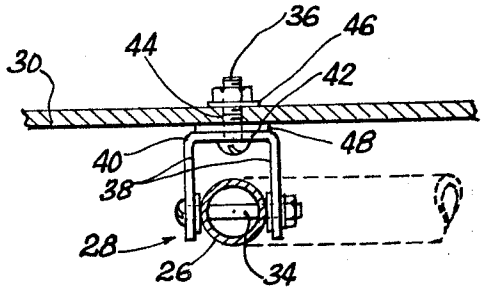


FIG. 3

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OUTBOARD MOTOR LIFTING DEVICE

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ABSTRACT OF THE DISCLOSURE

An outboard motor lifting device for a motor boat, comprising a lever arm, hinge means having a first swivel supporting the arm for fore and aft movement, and second swivel supporting the arm for lateral swinging movement on the boat to a storage position, a cable or other tension element connected to the arm and adapted to be removably connected to the outboard motor, the arm preferably having an extensible portion for increasing the effective leverage of the arm, and a bracket adapted to be mounted on the boat at a position spaced laterally from the hinge means for supporting the arm in its storage position.

This invention relates to a new and improved device for swinging an outboard motor upwardly from its normal position of use on a motor boat, to its raised position, in which the propeller is lifted above its normal level. Those skilled in the art will be familiar with the fact that it is frequently necessary to lift an outboard motor to its raised position, so that the boat may be moved into shallow water, without any danger of damaging or fouling the propeller.

Conventionally, an outboard motor is provided with a swingable support, so that the motor and the propeller may be swung upwardly. The typical outboard motor is equipped with a handle which may be used by the operator to lift the motor. This arrangement is satisfactory for small outboard motors. However, many large outboard motors are so heavy and unwieldy that it is difficult and awkward to lift the motor, particularly for an operator who is small in stature. Such large outboard motors have come into widespread use. Thus, the difficulty of lifting outboard motors has become a significant problem, particularly when the motorboat is to be operated by women or juveniles, which is frequently the case.

The present invention provides a device which makes it easy to lift an outboard motor, even when the motor is large, and the operator is small in stature. Generally, the motor lifting device of the present invention comprises a lever arm which is mounted on the boat by hinge means. A cable or other tension means is connected to an intermediate point on the lever arm, and is adapted to be connected to the outboard motor. Preferably, the tension member is arranged so that it may be removably connected to the lifting handle on the motor. The lever arm may be swung in a fore and aft direction so that the motor may be raised and lowered. Preferably, the hinge means provide a universal mounting so that the lever arm may also be swung laterally to a position in which it may be compactly stored. A bracket is preferably provided on the boat to support the lever in its storage position. As an added feature, the lever arm may have an extensible portion, whereby the leverage afforded by the arm may be increased. For storage, the extensible portion may be retracted.

Further objects, advantages and features of the present invention will appear from the following description, taken with the accompanying drawings, in which:

FIG. 1 is a fragmentary diagrammatic elevational section, showing an outboard motor lifting device to be described as an illustrative embodiment of the present invention.

FIG. 2 is a fragmentary front elevation showing the manner in which the lever arm may be moved to its storage position, the view being taken generally as indicated by the line 2—2 in FIG. 1.

FIG. 3 is a fragmentary section, taken generally along the line 3—3 in FIG. 2.

It will be seen that FIG. 1 illustrates a boat **10** which is equipped with an outboard motor **12**. As in the usual case, the motor **12** has a mounting bracket **14** which is clamped or otherwise secured to the rear wall or transom **16** of the motorboat **10**.

The entire motor **12**, including the propeller **18**, is swingable upwardly about a pivot **20**, carried by the mounting bracket **14**. Thus, the propeller may be raised to clear the bottom in shallow water, or to avoid any other obstruction.

The illustrated motor **12** is equipped with a handle **22** which is intended to be used by the operator in lifting the motor. The handle **22** is located at the rear of the motor **12**. The illustrated motor is of large size, with the result that considerable force must be exerted on the handle **22** to lift the motor. Moreover, due to the large size of the motor **12**, the handle **22** is located at a considerable distance to the rear of the transom **16**, so that an operator of small stature will have considerable difficulty in reaching the handle and exerting sufficient force to lift the motor.

However, the present invention provides a lifting device **24** which comprises a lever arm **26**. Hinge means **28** are provided to mount the lower end of the lever arm **26** on the boat. The hinge means **28** may be connected to any suitable portion of the boat **10**. In the illustrated construction, the hinge means **28** are connected to the front flange **30** of a pan or deck member **32** which extends across the boat, in front of the transom **16**. The deck member **32** is rigidly secured to the boat **10**. The flange **30** projects downwardly from the forward edge of the deck member **32**.

Preferably, the hinge means **28** provide the universal swivel mounting for the lever **26**, so that the lever may be swung laterally, as well as in a fore and aft direction. Thus, the illustrated hinge means **28** comprise a first swivel **34**, whereby the lever arm **26** may be swung fore and aft, and a second swivel **36** so that the lever arm may be swung laterally. The first swivel **34** is illustrated in the form of a pivot bolt which extends through the lower end of the lever arm **26** and also through the arms **38** of a U-shaped bracket **40**. The second swivel **36** is also illustrated as a pivot bolt, extending through the base **42** of the U-shaped bracket **40**, and also through a bore **44** in the supporting flange **30**. Washers **46** and **48** are preferably mounted on the bolt **36**, on the opposite sides of the flange **30**.

The lifting device **24** also comprises a tension member **50**, which may assume various forms, but is illustrated as a cable. One end of the tension member **50** is connected to an intermediate point on the lever arm **26**. As shown, a bracket **52** is mounted on the lever arm **26** to retain the cable **50**. The other end of the cable **50** is adapted to be removably connected to the outboard motor **12**, so that the lever arm **26** may be employed to lift the motor. As shown, the cable is formed as a loop so that it may be hooked behind the lifting handle **22**.

By virtue of the universal swivel hinge **28**, the lever arm **26** may be swung laterally to a storage position, as illustrated in broken lines in FIG. 2. It is preferred to provide a bracket **52** to support the lever arm **26** when it is swung to its storage position. The illustrated bracket **52** is U-shaped to receive and retain the lever arm **26**. The bracket **52** is adapted to be secured to the flange **30**, or

any other suitable supporting member on the boat **10**. When the lever arm **26** is in its storage position, the cable **50** may be wrapped around the lever so that the cable will be out of the way. As an added feature, the lever arm **26** is preferably provided with an extensible member **54**, whereby the length of the lever arm may be raised so that it will afford increased leverage. Preferably, the extensible member **54** is arranged to telescope into the lever arm **26**. Thus, extensible member **54** may be retracted when the lever arm **26** is to be stored, as shown in broken lines in FIG. 2. By virtue of the extensible member **54**, the lever arm **26** may be extended to a length considerably greater than could be accommodated by the space available when the lever is to be stored. For storage, the extensible member **54** may be retracted so that the lever will be accommodated in the available space in the boat.

When the lever arm **26** is not in use, it is conveniently stored in a horizontal position, extending laterally from the hinge means **28**, as shown in broken lines in FIG. 2. The bracket **52** supports and retains the lever **26**.

When the lever arm **26** is to be used, it is swung upwardly to a vertical position. The cable **50** is then attached to the lifting handle **22** on the outboard motor. To afford the maximum leverage, the extensible member **54** is then extended. The motor **12** may be lifted by swinging the lever **26** forwardly.

When the lever arm **26** is again to be stored, the extensible member **54** is retracted, and the cable **50** is wrapped around the lever arm. The arm is then swung laterally to a horizontal position, in which it is supported by the bracket **52**. Thus, the lever arm is always available, but is out of the way when not in use.

I claim:

1. An outboard motor lifting device for a motorboat,
said device comprising an elongated lever arm,
hinge means for swingably mounting the lower end of said arm on the boat,
and a tension member connected to said lever arm at an intermediate point,
said tension member having means for removably connecting said tension member to the outboard motor,
said hinge means comprising a universal swivel mounting for said lever arm whereby said lever arm is swingable in a fore and aft direction about said hinge means for lifting the motor while also being swingable laterally to a storage position when said tension member is disconnected from the motor.

2. A device according to claim **1**,
in which said universal swivel mounting comprises a first swivel supporting said lever arm for fore and aft movement, and
a second swivel supporting said lever arm for lateral swinging movement.

3. A device according to claim **1**,
including a bracket adapted to be mounted on the boat for supporting the lever arm in its storage position.

4. A device according to claim **1**,
including a bracket adapted to be mounted on the boat in a position spaced laterally from said hinge means for supporting the lever arm in its storage position.

5. A device according to claim **1**,
in which said lever arm includes an extensible member for increasing the leverage afforded by said arm.

6. A device according to claim **1**,
in which said lever arm comprises an extensible member telescopically mounted thereon for increasing the effective leverage of said arm.

7. A device according to claim **1**,
in which said tension member comprises a cable with a loop for disengageably connecting the cable to the motor.

8. A device according to claim **4**,
in which said lever arm comprises an extensible portion for increasing the leverage afforded by said arm,
said extensible portion being movable into a retracted position when the lever arm is swung into its storage position.

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