United States Patent [19]

Burger

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[54] **PORTABLE CLEANING DEVICE FOR OUTBOARD MOTORS**

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[52] **U.S. Cl.** ..... **115/.5 R;** 114/222; 115/17

[51] **Int. Cl.** **B63b 59/00**

[58] **Field of Search** ..... 115/17, 34 R, 34 A, 34 B, 115/34 C, .5 R; 114/222; 9/1 R; 61/68

[56] **References Cited**

UNITED STATES PATENTS

624,198	4/1899	Eicke	114/222
632,919	9/1899	Farley	114/222
3,205,851	9/1965	Wiswell	114/222
3,220,374	11/1965	Sloan	115/.5 R

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[57] **ABSTRACT**

An outboard motor and an in-out drive portable cleaning device which includes a water impervious sack affixed to a rigid frame member wherein said combination is mounted on an outboard motor or drive such that the drive portion is wholly contained within the sack portion, said sack portion being filled with a clean liquid, such as fresh water, for supplying clean liquid to the drive portion of said outboard motor or in-out drive for flushing same when the motor is placed in a running condition, the sack separating the clear liquid from any pre-existing outside medium.

1 Claim, 4 Drawing Figures

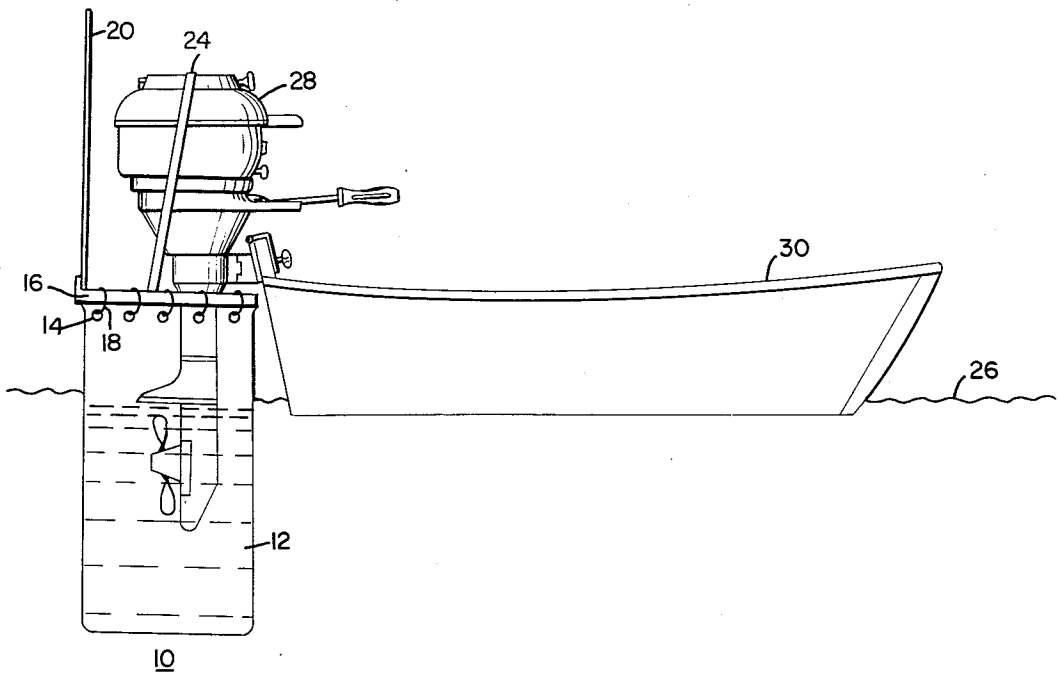


FIG. 1

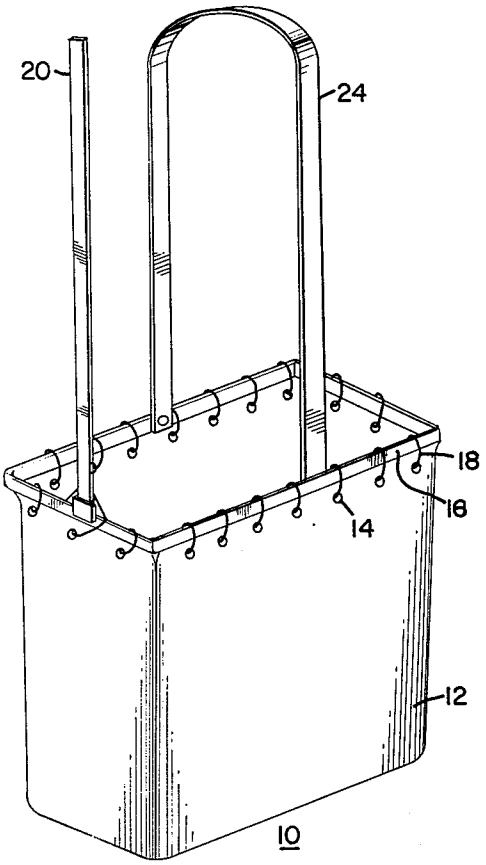
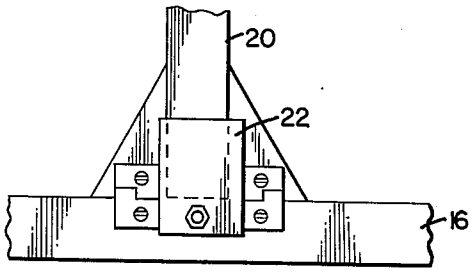


FIG. 1a



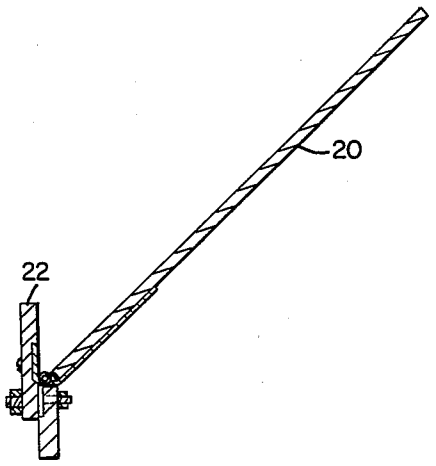
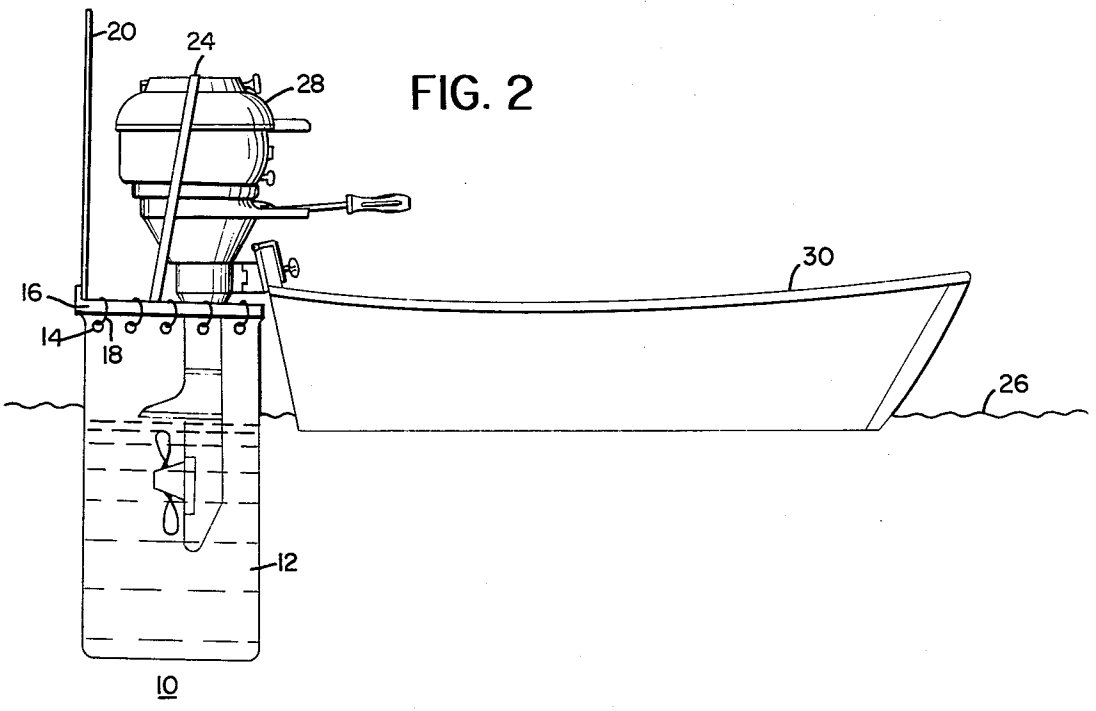


FIG. 1b

FIG. 2



PORTABLE CLEANING DEVICE FOR OUTBOARD MOTORS

BACKGROUND OF THE INVENTION

This invention relates to a portable device for use in the flushing and cleaning of outboard motors and in-out drives, more particularly, the driving member of said apparatus. The problem of cleaning and flushing outboard motors in order to enhance their operation and to increase the life expectancy of the outboard motors is well known in the art. The problem and some of the solutions thereto, are disclosed in the patent to Guhlin, U.S. Pat. No. 3,002,488, of Oct. 3, 1961, and also in the patent to Benson, U.S. Pat. No. 2,611,631, of Sept. 23, 1952. Both of the aforementioned patents disclose a novel means by which the drive portion of outboard motors are flushed and cleaned. However, neither of the patents disclose flushing means as portable, as accessable, as efficient and as inexpensive as that disclosed herein by the applicant.

BRIEF SUMMARY OF THE INVENTION

By way of information, an in-out drive unit is that type in which the motor portion is located within the boats and the driving member is located outside of the boat. This differs from an outboard motor in which the entire unit is outside the boat. For purposes of this specifications, both types will be referred to as outboard motors.

The present portable cleaning device for outboard motors overcomes many of the defects of the prior art, mainly, that of portability, accessability, ease in operation, ease in storage thereof, and a device which can be used anywhere, both in and out of the water. The portable flushing device consists of a rugged, water-proof sack affixed to a rigid frame. The rigid frame in turn has a mounting strap thereon for the purpose of affixing and supporting the sack and frame to the outboard motor. The drive shaft and propeller of the outboard motor are completely enclosed by the inner boundaries of the sack. The sack is placed over the drive shaft, while the drive shaft is out of the water, at this time, the drive shaft is lowered in the water, i.e., placing the outboard motor perpendicular to the horizontal, and the bag is then filled with fresh, clean water. The motor is then placed in an operating position, which causes the clean water to flow throughout the drive shaft and other moving members of the drive shaft thereby cleaning the outboard motor of any salt, sand, silt, or any other similar materials which may have a deleterious effect on the moving parts of an outboard motor. The removal of the deleterious materials inherently improves the efficiency and enhances the longevity of the outboard motor.

The present invention enables the cleaning of an outboard motor without the removal of the motor from the boat, which can be a strenuous procedure. Because of the increased size in outboard motors, the most opportune and appropriate place to clean such motors is while the boat is in its natural environment, the water.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the portable cleaning device.

FIG. Detail 'A' is an enlarged view of the section taken at A.

FIG. Section 'A' is an enlarged side view of Detail 'A'.

FIG. 2 is a pictorial view showing the portable flushing device connected to an outboard motor.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, a receptacle **10,** is illustrated comprising a strong inelastic water-proof sack, **12.** The sack **12** may be fabricated from some material such as plastic, rubber or the like. It is necessary that the material be substantially strong and water-proof. The sack **12** has a plurality of spaced holes **14** around its open top end, said holes or grommets preferably being spaced equally on the sack, and parallel to the ends of the sack. The cleaning device **10,** further includes, a rigid frame member **16,** fashioned to receive the sack **12.** The frame **16** is disclosed as being rectangular in nature, however, the frame may be square, elliptical, oval or circular with substantially similar results still being obtained. The sack **12** is affixed to the frame **16** by means of lacing **18,** which is threaded through the holes or grommets, **14,** securing the sack **12** to the frame **16.** Although lacing is disclosed as the affixing means, it can be readily seen that the sack **12** can be affixed by a multitude of other well known methods to the frame **16.** The flushing device **10** further includes a handling bar **20,** which is hingedly affixed by conventional means to the frame **16.** Also affixed on the frame **16** adjacent to the handling bar **20,** is a stop **22,** shown in Detail 'A' and Section 'A'. Support strap **24** is shown affixed to the frame **16,** although not necessarily restricted thereto, for it can be seen that the support strap **24** can easily be attached to the sack **12** or to the combination sack **12** and the frame **16.**

In operation, the user of the portable cleaning outboard motor flushing device **10** would usually find himself on his boat, which could be in some body of water, such as a river, ocean, or a lake. It is well known that salt water, particularly, is very injurious to metals in that it enhances the corrosion process of metals. Therefore, it would be advantageous to rid the motor and its driving members of any salt deposits, or other foreign materials, which is accomplished by the use of the cleaning device **10.** In order to affix the portable cleaning device **10** to the outboard motor **28,** the user would tilt the motor such that the propeller is completely out of the water. At this time, the user would, by means of handling bar **20,** place the portable flushing device **10** over the outboard motor **28** such that the drive shaft and the propeller are completely enclosed within the portable flushing device **10.** Upon enclosing the drive shaft and the propeller of the outboard motor, the support strap **24,** is hooked or placed over the housing of the motor, thus holding the portable flushing device in place, and also relieving the user from the necessity of holding the portable flushing device **10** in place. The motor **24** is then placed in its normal operation position, i.e., in a direction perpendicular to the horizontal, such that the drive shaft and the propeller are in the water **26** in which the boat is berthed, excepting that now, the shaft and propeller are isolated from the water **26** by means of the cleaning device **10.** While in this position, the bag is solely held onto the outboard motor by the use of the support strap **24.** The support strap **24** does not necessarily have to be fabricated from materials of great strength for reasons which will be set forth.

Fresh clean water is then placed within the reservoir created by the cleaning device **10** and is completely retained within the sack **12** due to the water impervious material of which the sack **12** is fabricated. The sack **12** can only be filled to the level of the water **26.** The fresh water and the outside water **26** which in this example, is salt water, have essentially the same specific gravity. Therefore, when the sack **12** is filled, it will be at the same level of the water **26** and will place no extra weight on the support strap **24** because the weights of the two liquids will be in equilibrium with respect to each other.

Referring to FIG. Detail 'A' which illustrates an enlarged view taken at Section 'A' of FIG. **1,** the handling bar **20** can be seen affixed to the frame **16** positioned adjacent a support stop **22.** In operation, the support stop **22** performs the function of preventing the handling bar **20** from being extended past the vertical when taken with respect to the direction of the body of water **26.** In other words, the handling bar is not allowed to move in the direction past the support stop **22.**

Referring to FIG. **1,** Section 'A', the conventional means by which the handling bar **20** and the support stop **22** is affixed to the frame member **16** is illustrated very clearly. Obviously, other attaching means may be utilized.

Referring to FIG. **2,** it can be seen that there is a body of water **26** which is in this instance, a salt water ocean **26,** having emersed therein, said portable cleaning device **10** containing a medium of fresh clean water and a drive member within its boundaries. The fresh clean water will not mix with the water medium **26,** which is the purpose of the sack **12.** The outboard motor **28,** which is affixed to boat **30,** is then turned on, and the operation of such, forces the fresh clean water to circulate throughout the shaft water pumps, cooling chambers and jackets, and driving members of the outboard motor **28,** thereby cleaning the outboard motor of any silt, sand, salt or other deleterious material which has collected through normal use.

What is claimed is:

1. In combination with an outbard motor drive unit and boat, including:

a flexible inelastic sack of substantial strength, having one open end;

a plurality of equally spaced grommets placed on said sack, placed on a line substantially parallel to the open end of said sack, and positioned adjacent the open end of said sack;

lacing means;

a rigid shaped frame member completely closed upon itself and having a circumference substantially equal to that of the open end of said sack, said frame member adapted to receive said open end of said sack, said sack being affixed thereto by said lacing means in cooperation with said grommets and said frame;

a longitudinal handle pivotly fixed on said frame to rotate in a plane perpendicular to the water surface containing said boat, for positioning the combination of said frame and said sack about said outboard motor drive unit;

a stop member including an upwardly extending rectangular bar fixed to said frame and positioned adjacent said pivotly fixed longitudinal handle positioning said handle between said stop member and said frame member, and further, such that said stop member lies in the pivotal plane of said handle, thereby inhibiting all movement of said handle past said stop member; and

a support strap affixed to the combination of said frame and said sack for holding said combination about said outboard motor drive unit, thereby allowing the filling of the clean liquid into the interior of said sack and retaining said clean liquid in intimate contact with said outboard drive unit, thereby further preventing the outboard drive unit from being in contact with any foreign elements.

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