

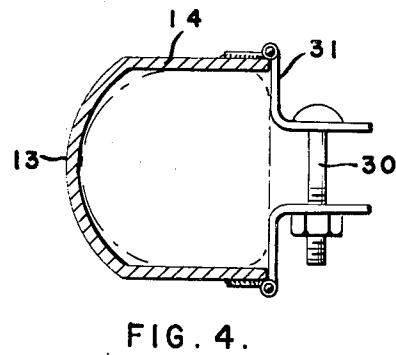
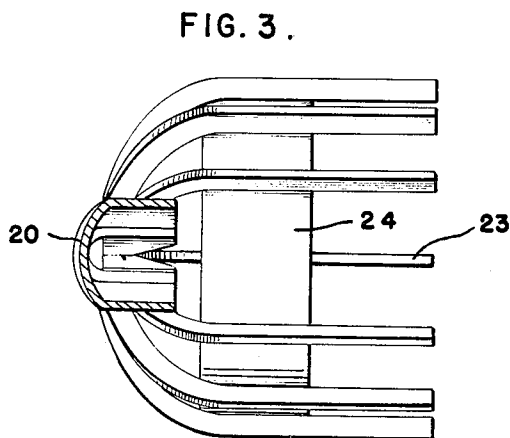
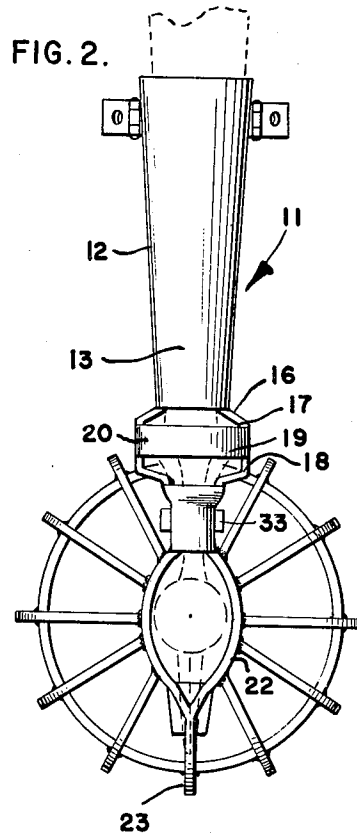
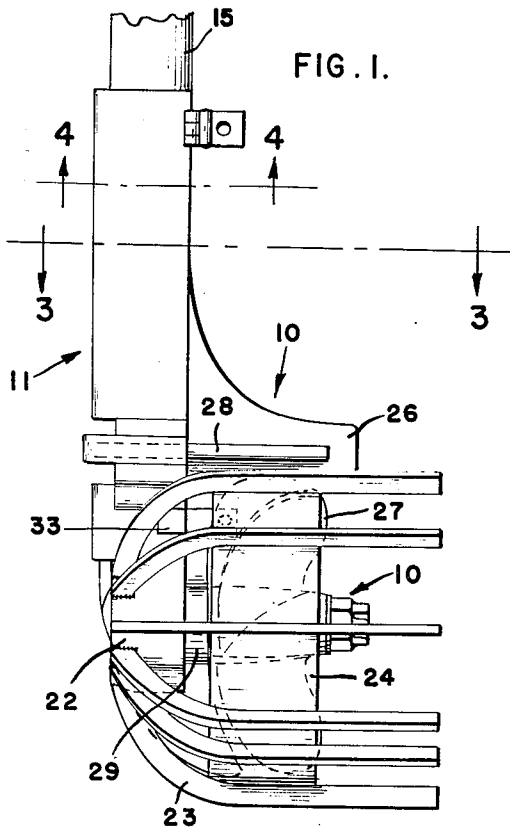
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GUARD FOR AN OUTBOARD MOTOR PROPELLER

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GUARD FOR AN OUTBOARD MOTOR PROPELLER

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1 Claim. (Cl. 115—42)

The present invention relates to a guard or protector for marine engines, and more especially is directed to means adapted to be attached to an outboard motor for protecting the propeller blades from debris and the like, and at the same time serve to force the water rearwardly of the propeller blades whereby a "pulling" effect, as well as a "pushing" effect is achieved, thereby increasing materially the maneuverability of the boat.

While the inventive concept is illustrated in connection with a 3.2 Evenrude two cylinder sport twin outboard motor, it is, of course, to be understood that the guard or protector may be employed with other types of outboard motors.

I am, of course, well aware that numerous guards have heretofore been provided for attempting to protect the blades of a propeller on an outboard motor, and while these prior guards are somewhat effective, they do possess objectionable characteristics. Perhaps one of the most undesirable features of the present guards is that the propeller blades are not fully protected from obstacles such as limbs, roots, rocks and floating debris, which objects may approach the propeller blades from every direction.

Accordingly, an important object of my invention is to provide a guard or protector for the propeller blades of outboard motors wherein means is included to prevent all types of obstacles from damaging the blades of the propeller.

Yet another object of my invention is to provide a protector or guard for outboard motors which may be manufactured as a unitary structure of a light weight material, thus permitting the guard to be manufactured by mass production methods with a minimum of expense.

Still another object of my invention is to provide a guard for outboard motors wherein the means for protecting the propeller blades also functions to direct the water directly into the blades instead of spreading out relative to the blades, whereby the maneuverability of the boat equipped with the motor is augmented.

To accomplish the above and other objects, the invention comprises a supporting member adapted to be detachably connected to the housing of the outboard motor, the supporting member having integrally formed therewith a plurality of radial vanes or fins of such length as to extend a substantial distance rearwardly of the propeller blades, the radial fins being maintained in proper position by means of an annular surface secured to the fins, the annular surface being located at a point which will surround the blades of the propeller, the diameter of the annular surface being slightly greater than the diameter of the blades to permit the free rotation of the blades. The fins or vanes serve to divert obstacles approaching the propeller in all directions away from the propeller, and the annular surface tending to ward off any small objects which may pass through the radial fins, while at the same time, the annular surface will force the water directly rearwardly respecting the propeller

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blades to provide a pulling effect in addition to the pushing effect for increasing the maneuverability of the boat.

With the foregoing and other objects in view, the invention consists in the details of construction, and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this application, wherein like characters denote corresponding parts in the several views, and in which:

Figure 1 is a view in side elevation of the guard or protector positioned in operative relationship on the outboard motor.

Figure 2 is a front elevational view of the guard shown in Figure 1.

Figure 3 is a sectional view taken along the line 3—3 of Figure 1, the view looking in the direction of the arrows, and

Figure 4 is a sectional view taken along the line 4—4 of Figure 1, the view looking in the direction of the arrow but being on a somewhat enlarged scale.

With reference to Figure 1, it will be noted that numeral 10 denotes generally an outboard motor, and 11 a guard or housing.

The guard 11 comprises an imperforate body portion 12 of a suitable lightweight metal, the body portion 12 having an arcuate wall 13 which merges with parallel flat side walls 14. The body portion tapers downwardly from its upper end as shown in Figure 2 and is of such dimensions as to fit snugly about housing 15 of the motor.

The lower end of the body portion 12, and more particularly the side walls 14 thereof, each supports straps 16 and each strap 16 includes spaced angular portions 17 and 18 joined by a flat portion 19. A semi-circular band 20 is attached to the flat portions 19 and the periphery of the band extends forwardly of the portions 19, as perhaps more clearly shown in Figure 1. Each angular portion 18 merges with a vertical member 21 which is attached to an oval shaped hub 22. A plurality of spaced apart radially extending fingers or vanes 23 are secured to the hub 22 by welding or the like, and these vanes or fingers serve to protect the propeller blades, as will later be more fully described.

An annular member 24 is welded or otherwise conveniently attached to the vanes, and the annular member is disposed rearwardly respecting the body portion 12. The annular member serves to rigidly support the fingers or vanes 23 in the position shown in Figures 1 and 2, and by reason of the fact that the vanes project a substantial distance beyond the rear edge of the annular member, the propeller blades will be protected from debris and the like while the boat is drifting.

In order to mount the housing on the motor, the motor is preferably placed on the ground or floor, and the power plant (not shown) and the fin 26 will space propeller blades 27 above the supporting surface 11. The housing 10 may then be introduced onto the motor and with the body portion 12 embracing the housing 15, and the strap 20 and its associated parts clearing horizontal fins 28 in the casing. The oval shaped hub 22 will clear gear casing 29 and the propeller blades 27 will be located within the annular member 24, it, of course, being understood that the blades will clear the inner periphery of the annular member. After the housing has been thus disposed on the motor, the upper end may be secured by inserting a bolt or the like 30 through aligned openings provided in hinge clip members 31 attached to the side walls 14 of the body portion 12 adjacent to the upper end of the body portion. The housing is also attached in proximity to its lower end by means of a clip member defined by a pair of straps 33 extending horizontally from the hub 22 in approximate parallelism to the propeller

shaft of the motor. Each strap is provided with an aperture adjacent the free end thereof, the apertures being in alinement for receiving a removable securing device such as a bolt (not shown). Consequently, the guard is firmly attached to the outboard motor in the neighborhood of its upper and lower limits and can be readily removed from the motor by removing the bolts associated with the clip member 31 and the straps 33.

It will be appreciated from the above description that any small obstacles, such as roots, limbs, etc. which may pass between the vanes 23 will be directed away from the propeller blades 27 by reason of the annular member 24 and, as a consequence, the propeller blades are protected from debris approaching the blades in any direction. The annular member 24 in addition will support the vanes 23 in the positions illustrated and thus prevent positively any danger of the fins being bent inwardly respecting the propeller blades, and the water will engage the propeller blades from a point directly forward of the blades instead of from all directions. This arrangement will cause the water to be forced by the blades directly rearwardly and thereby achieve a pulling effect as well as a pushing effect. This increases materially the maneuverability of the boat.

Another important feature of the guard protector is that it extends from the water level to the lowermost point of the outboard motor housing, thus protecting not only the propeller blades but the muffler and gear housing.

The invention is not to be confined to any strict conformity with the showing in the drawing, but may be changed or modified, so long as such changes or modifica-

tions mark no material departure from the salient features of the invention as expressed in the appended claim.

I claim:

A guard for an outboard motor having a propeller shaft housing and a propeller at the lower end thereof comprising a body portion embracing the propeller shaft housing, means securing the body portion to said housing, a rigid support member carried by the lower end of the body portion, a plurality of spaced apart rigid fingers secured to and extending radially from said support member, and a rigid annular element secured to the inner faces of the fingers at a point rearwardly of the body portion to further support said fingers and also surround said propeller, the free ends of the rigid fingers extending a substantial distance rearwardly of said annular element whereby the propeller blades are protected from debris, the annular element also serving to prevent said fingers from being bent inwardly to contact the said propeller blades.

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