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VEHICLE FOR CUTTING MARINE GROWTH

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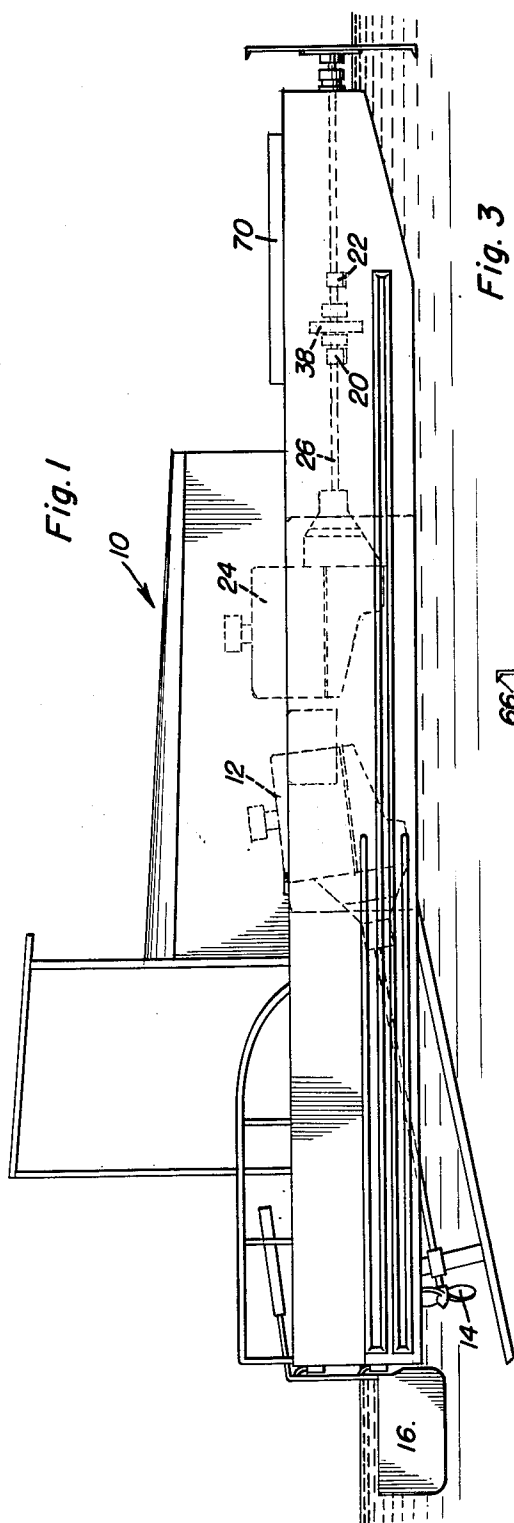
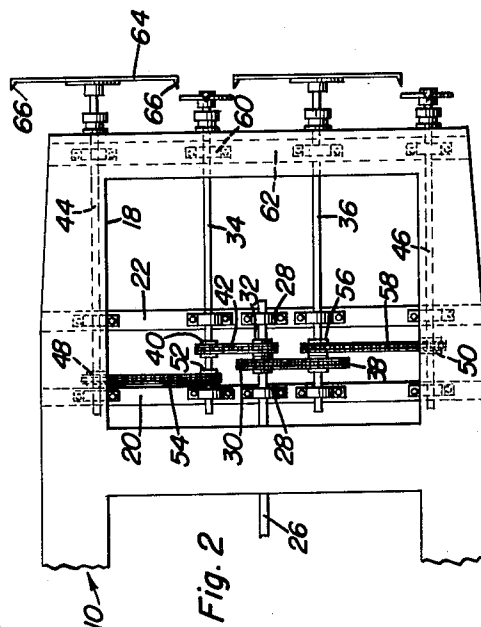
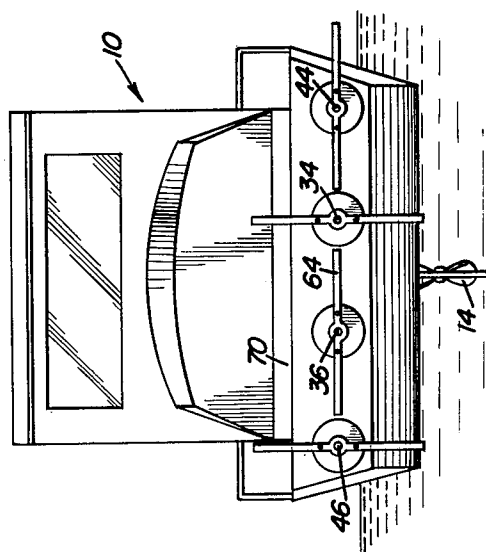


Fig. 3



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VEHICLE FOR CUTTING MARINE GROWTH

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4 Claims. (Cl. 56—8)

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This invention relates to new and useful improvements in mowers and the primary object of the present invention is to provide an apparatus for cutting and destroying water lilies and other such marine growth.

Another important object of the present invention is to provide a vehicle for cutting and destroying water lilies and the like including a plurality of vertically rotating cutters disposed forwardly of the vehicle to prevent lilies and other such marine growth from fouling the propelling means for the vehicle.

A further object of the present invention is to provide a lily cutter including a plurality of spaced parallel cutter supporting shafts and a novel and improved means operatively connecting the shafts together and to a source of power.

A still further aim of the present invention is to provide an apparatus for cutting and destroying undesirable vegetation in a body of water that is simple and practical in construction, strong and reliable in use, inexpensive to produce, install and service, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of the present invention;

Figure 2 is a fragmentary plan view of Figure 1; and,

Figure 3 is a front elevational view of Figure 1.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a water-borne vehicle or flat bottom boat of any suitable size having a power plant 12 thereon that rotates a propeller 14 at the rear of the boat whereby the boat will move upon a body of water. The boat 10 is also provided with a rudder or steering means 16.

An opening 18 is provided in the deck of the boat, at the hollow forward end thereof, and a pair of cross-members 20 and 22, within the hollow front of the boat are terminally attached, by any suitable means, to the sides of the boat.

An additional power plant 24 is mounted on the boat and drives a longitudinally extending horizontal drive shaft 26 that is journaled for rotation in bearings 28 on the cross-members.

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The drive shaft 26 supports a drive gear 30 and a sprocket 32, both of which are positioned between the cross-members 20 and 22.

An inner pair of drive shafts 34 and 36 parallel the drive shaft 26 and are journaled for rotation on bearings, such as 28, on the cross-members 20 and 22. The shaft 26 is located between the shaft 34 and 36, as shown in Figure 2 of the drawings, and the shaft 36 supports a gear 38 that engages the drive gear 30. The shaft 34 supports a sprocket 40 that is connected to the sprocket 32 by an endless drive chain 42.

A pair of outer driven shafts 44 and 46 are journaled for rotation in bearings, such as 28, on the cross-members 20 and 22. These outer shafts 44 and 46 parallel the shafts 26, 34 and 36. The shaft 44 supports a sprocket 48 and the shaft 46 supports a sprocket 50. The sprocket 48 is connected to another sprocket 52 on the shaft 34 by a drive chain 54 and the sprocket 50 is connected to a further sprocket 56 on the shaft 36 by a drive chain 58.

The forward ends of the shafts 34, 36, 44 and 46 extend forwardly of the front end of the boat 10 and are journaled for rotation in bearings 60 carried by a further cross-member 62. The forward ends of the shafts 34, 36, 44 and 46 support elongated cutters 64 having sharpened flanges 66 at their ends.

The cutters on the forward ends of the shafts 34 and 46 lie in a vertical plane parallel to a vertical plane through the cutters on the forward ends of the shafts 36, 44 and closer to the front end of the boat than the cutters on the shafts 36, 44.

The cutters all rotate at the same speed, however, the cutters on the shafts 34 and 46 are so mounted as to be horizontal when the cutters on the shafts 36 and 44 are vertical as shown in the drawings. It is also noted that the shafts 34 and 44 rotate clockwise looking at the front of the boat whereas the shafts 36 and 46 rotate counterclockwise, as such an arrangement has proven to be highly satisfactory in efficiently cutting water growth.

The opening 18 is closed and the gears, sprockets and drive chains shielded by a suitable closure member 70.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even

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though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. In combination with a boat having a power means and a forward end, a plurality of spaced parallel horizontally disposed shafts mounted for rotation on the boat and disposed longitudinally of the boat, said shafts being operatively connected to the power means and including forward end portions projecting forwardly of the forward end of the boat and located above the water line of the boat, and vertically rotating cutter blades centrally fixed on the forward end portions of the shafts for cutting vegetation in a body of water.

2. The combination of claim 1 wherein said shafts include a first and second pair of shafts, the cutter blades on said first pair of shafts being coplanar with each other and staggered and off-set from the cutter blades on said second pair of shafts, and means operatively connected to the first and second pair of shafts for rotating one pair of shafts clockwise and the other pair of shafts counter-clockwise.

3. The combination of claim 2 wherein all of said cutter blades include sharpened end flanges, the cutter blades on said first pair of shafts being

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90° out of phase with the cutter blades on said second pair of shafts whereby the cutter blades on said first pair of shafts will be vertical when the cutter blades on the second pair of shafts are horizontal.

4. The combination of claim 1, wherein said shafts include an inner pair of shafts and an outer pair of shafts, said power means including a drive shaft disposed between and paralleling said inner pair of shafts, drive connections between said drive shaft and each of said inner pair of shafts, a first sprocket on one of said inner pair of shafts, a second sprocket on one of said outer pair of shafts, a sprocket chain about said first and second sprockets, a third sprocket on the other of said inner pair of shafts, a fourth sprocket on the other of said outer pair of shafts, and an additional sprocket chain about the third and fourth sprockets.

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