Sept. 2, 1952 J. R. HOOVER 2,608,946

BOAT REVERSING MECHANISM FOR OUTBOARD MOTORS

Filed April 26, 1950 2 SHEETS—SHEET 1

Fig. 1.

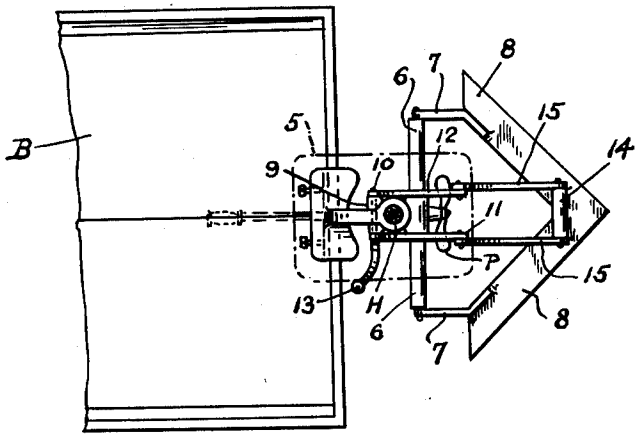


Fig. 2.

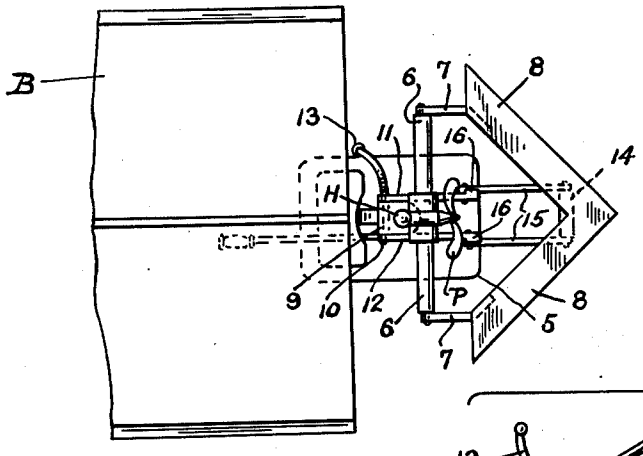


Fig. 3.

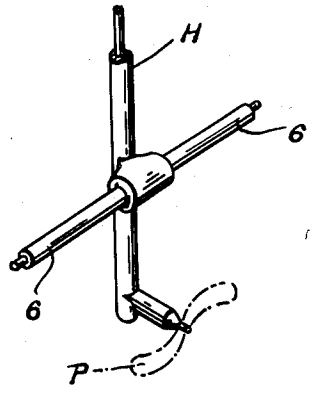
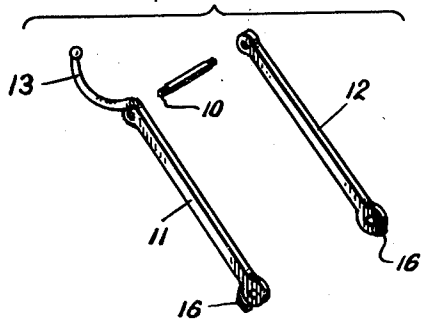


Fig. 4.



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Fig. 5.

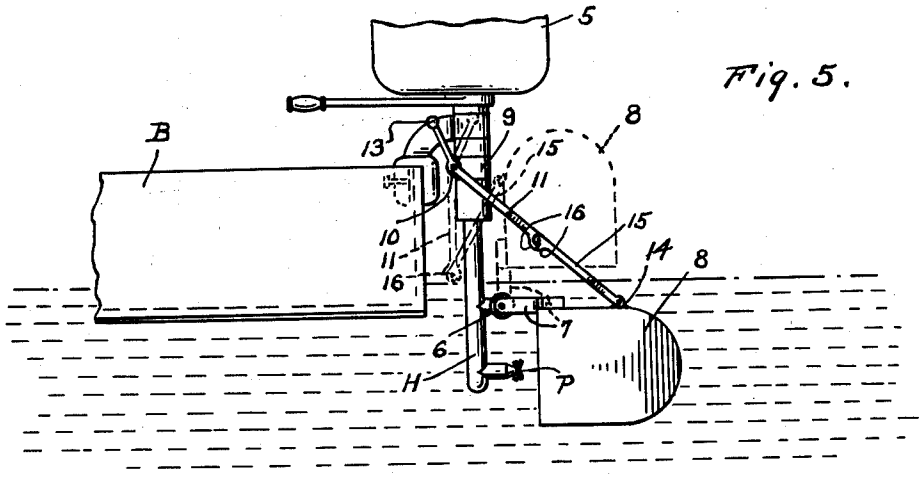


Fig. 6.



Fig. 7.

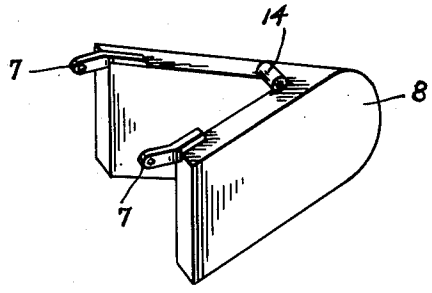
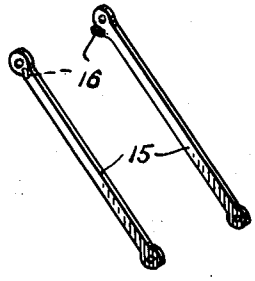


Fig. 8.



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BOAT REVERSING MECHANISM FOR OUTBOARD MOTORS

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Application April 26, 1950, Serial No. 158,245

1 Claim. (Cl. 115—18)

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This invention relates to the official class of marine propulsion and more particularly a new and novel boat reversing mechanism for outboard motors.

The primary object of this invention resides in the provision of means attached to an outboard motor whereby that boat to which the motor is attached can be reversed from forward to rear movement through the water with a forwardly driving propeller.

Another object of this invention resides in the provision of means attached to an outboard motor at such distances from the propeller thereof that braking action against the forward movement of the boat to which the motor is secured is entirely obviated and rearward or reverse propulsion thereof is immediately permitted under control of the operator.

A further object of this invention resides in the provision of means attached to or initially constructed on an outboard motor whereby that boat to which the motor is attached can be guided and reversed from forward to rearward movement through the water.

A still further object of this invention resides in the particular combination of the outboard motor and boat reversing mechanism.

One of the salient features of this invention resides in so disposing the sides of the reversing blade relative to the propeller of the motor that the rearward thrust of water thereby will act to propel that boat to which the motor is attached in a rearward direction through the water.

With these and other objects in view, this invention resides in certain novel features of construction and arrangement of elements to be hereinafter more particularly set forth in the specification, illustrated in the accompanying drawings and pointed out in the appended claim and, although this disclosure depicts my present conception of the invention, the right is reserved to resort to such departures therefrom as come within the scope of the claim.

In the accompanying drawings forming a part of this application;

Fig. 1 is a plan view of a boat showing the outboard motor thereon.

Fig. 2 is a bottom view thereof.

Figs. 3, 4, 6, 7 and 8 are detail perspective views of parts of the boat reversing mechanism.

Fig. 5 is a side view of the boat showing the outboard motor thereon and reversing means disposed in operative position in full lines and in inoperative position in dotted lines.

In the present illustration of this invention,

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the numeral 5 designates an outboard motor attached to a boat B and, among other well known elements, consists of a power shaft housing H supporting a propeller P thereon.

Formed on the lower portion of said housing H and extending laterally on opposite sides thereof are elongated arms 6 to the outer ends of which are pivotally connected brackets 7 having their outer ends rigidly secured to a substantially V-shape reversing blade having forwardly diverging sides 8 disposed such distance relative to the propeller P as to act as an abutment for water thrust rearwardly by the propeller and thereby cause the water to reverse the movement of the boat from forward to rearward travel through the water. Said reversing blade being so disposed relative to the propeller as to perform its assigned functions rather than acting as a brake to forward propulsion of the boat.

Secured on the upper portion of the housing H is a collar 9 to which is pivoted, as by a laterally extending short shaft 10, rearwardly and downwardly extending levers 11 and 12 and in order to manually manipulate said levers, a handle 13 is formed on the lever 11.

Said levers have their lower or rear ends pivotally connected to a bearing 14 on the rearward upper portions of the reversing blade by spaced links 15 and, in order to limit the movement of the levers in one direction, those ends thereof which are pivotally connected to the links are provided with abutment lugs 16 or other suitable means whereby similar results are attained.

Through the instrumentality of the aforesaid cooperating elements, the boat is propelled forwardly in the usual manner by the fixed or unadjustable propeller with the reversing blade raised as shown by dotted lines in Fig. 5 of the drawings and where the operator desires to reverse the boat from forward to rearward movement, he manipulates the handle 13 and thereby lowers the reversing blade in opposed relation to the propeller and rear thrust of water thereby.

In that the outboard motor is swingable from side to side on its vertical axis, the reversing blade also functions as a rudder to guide the boat at the will of the operator.

Through the instrumentality of the elements forming the subject matter of this application, it is apparent that means of simple construction are provided to efficiently and positively perform the functions assigned thereto and can be either attached to outboard motors now on the market or be built thereon during manufacture of the same.

Having thus described my invention, what I claim and desire to protect by Letters Patent is:

The combination with an outboard motor including a shaft housing and a rearwardly extending propeller carried thereby, laterally extending arms secured to the shaft housing above the propeller, a substantially V-shape reversing blade, in plan, disposed rearwardly of the propeller when in operative position with its sides diverging forwardly and terminating to the rear and on opposite sides of the propeller, forwardly extending brackets rigidly secured to the forward upper sides of the reversing blade and having their forward ends pivotally connected to opposite ends of the laterally extending arms, a laterally extending bearing secured to the upper surface of the reversing blade adjacent its rear end, a collar secured to the shaft housing adjacent its upper end, a short shaft journalled in said collar, rearwardly and downwardly extending levers fixed to opposite ends of said short shaft, links pivotally connected at their forward ends to the lever with their rear ends pivotally connected to said laterally extending bearing on the reversing blade, abutment lugs formed on the adjacent of the levers and links limiting downward movement of the reversing blade, and a handle formed on the upper end of one of the levers.

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