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Rowe

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[54] **TROLLING APPARATUS FOR BOATS**

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[52] **U.S. Cl.** ..... **114/145 A**

[51] **Int. Cl.** **B63h 25/44**

[58] **Field of Search** ..... 114/145 A, 145 R

[56] **References Cited**

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[57] **ABSTRACT**

A trolling board for a boat has a plate for creating drag and retarding the movement of the boat through water, and a pair of spring channels for slidably and pivotally receiving a longitudinally extending bar connected to an end of the plate. Preferably, a pair of boards are symmetrically mounted on the transom of the boat. The plates are arranged to pivot about a horizontal axis which is parallel to the transom when a force is applied thereto which is in excess of a predetermined force.

7 Claims, 5 Drawing Figures

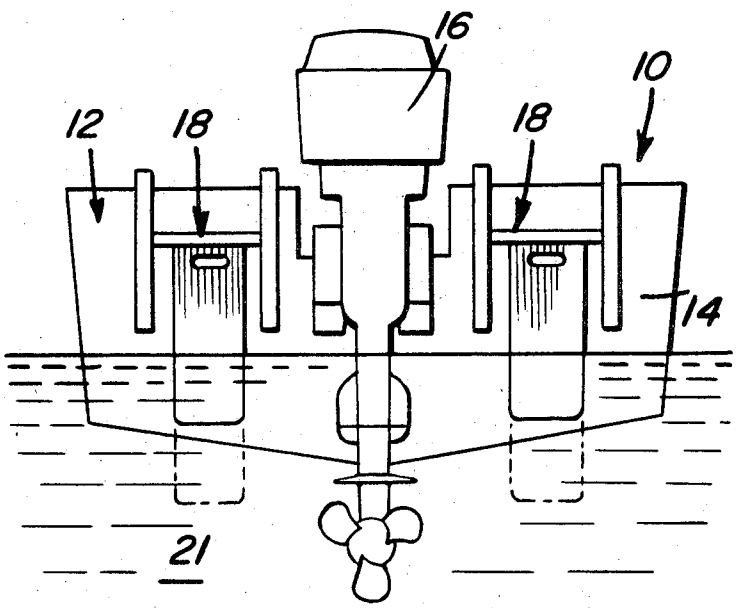


Fig. 1

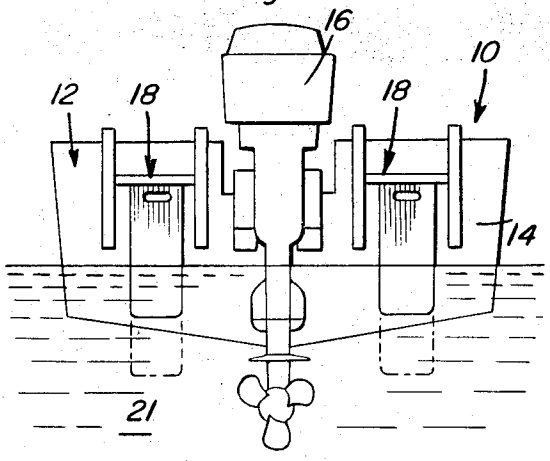


Fig. 2

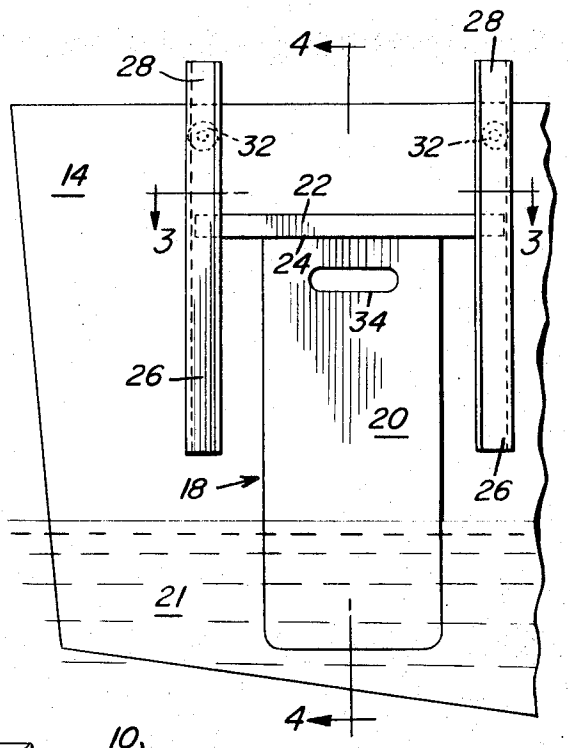


Fig. 3

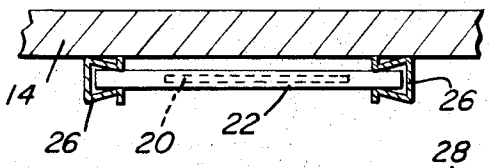


Fig. 4

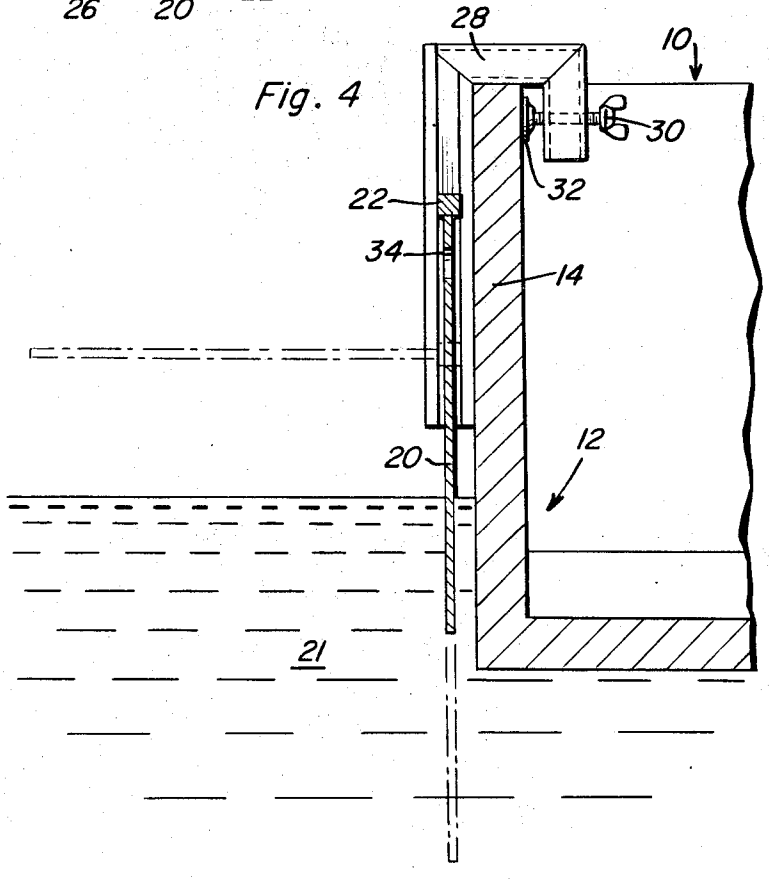
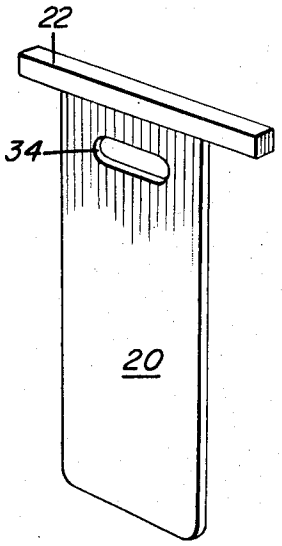


Fig. 5



TROLLING APPARATUS FOR BOATS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to trolling boards which permit a boat to be used for trolling and the like even when propelled by a large motor or engine. Further, this invention relates to trolling boards which may be used with inboard, inboard-outboard, or outboard type boats.

2. Description of the Prior Art

Boating has become very popular in recent years. However, the activities in which a boat may be employed are varied, resulting in varied propulsion requirements. The trend with both outboards and inboards has been to employ a large motor or engine as the standard propulsion for such activity as waterskiing, and to use a small motor, such as an electric motor, for low speed activities such as trolling and the like.

The reason for using a small motor at low speeds is that a large motor or engine may not run slowly enough for the low speed operation. Further, spark plugs tend to foul when a large motor or engine is used in low speed operation, and the motor or engine may be damaged when being effectively idled under load for long periods of time.

An alternative to using two separate motors is to increase the resistance of the boat through the water and permit the large motor or engine to run at increased R.P.M.'s for a given speed of the boat. A known device for creating this drag is shown in, for example, U.S. Pat. No. 2,807,228. This known device has a rear flap fixedly hinged to the transom of a boat for selected pivotal movement between two end positions about a horizontal axis.

It is desirable, however, that such a flap pivot when a force is applied thereto which is greater than a predetermined force, so that the flap may ride safely over underwater obstructions and the like.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a drag increasing device for boats which will pivot about a horizontal axis when a force which is greater than a predetermined force is applied thereto, but will not pivot when the boat is moving through water at, for example, trolling speeds.

This and other objects are accomplished according to the present invention by providing a trolling board for a boat and having means for creating adjustable drag and retarding the movement of a boat through water, and means for mounting the drag creating means on a boat having a transom for pivotal movement about a horizontal axis which is parallel to the transom when a force in excess of a predetermined force is applied to the drag means.

Adjustment of a trolling board according to the present invention will adjust the speed of trolling for various size boats, physical conditions, and motor power outputs.

In a preferred embodiment of the present invention, the drag creating means is a plate, and the mounting means includes a longitudinally extending bar connected to one side of the plate. The bar preferably has a rectangular cross section, and the mounting means may further include spring channel means for slidably and pivotally receiving the bar. The mounting means may also have means for attaching the spring channel means to the transom of the boat.

Advantageously, there are a pair of trolling boards symmetrically mounted on the transom of the boat, one board on either side of the propeller.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schemmatic, rear elevational view, showing a pair of trolling boards according to the present invention mounted on the transom of a boat.

FIG. 2 is a fragmentary rear elevational view, drawn to a larger scale than FIG. 1 and showing a trolling board according to the present invention.

FIG. 3 is a sectional view taken generally along the line 3—3 of FIG. 2.

FIG. 4 is a sectional view taken generally along the line 4—4 of FIG. 2.

FIG. 5 is a perspective view showing a plate with an attached longitudinally extending bar for a trolling board according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring first to FIG. 1 of the drawings, a boat **10**, which may be a conventional outboard type of pleasure boat, has a back end or stern **12** with a transom **14**. A conventional outboard motor **16** is shown mounted on boat **10** in a conventional manner. A pair of trolling boards **18** are symmetrically mounted on transom **14**, one board **18** on either side of motor **16**.

Referring now to FIGS. 2–5 of the drawings, each trolling board **18** has a plate **20** for creating drag and retarding the movement of boat **10** through water **21**. Plate **20** has a longitudinally extending bar **22** connected to one side **24** thereof. Preferably, plate **20** is a longitudinally extending plate as shown, and side **24** is one of the ends. Bar **22** forms part of a means for mounting plate **20**. Another part of this means is formed by a pair of spring channels **26** which are arranged for slidably and pivotally receiving bar **22**. Bar **22** has a rectangular, and preferably square, cross section permitting the pivotal movement in channels **26**, and will snap into position therein at positions 90° apart. Spring channels **26** may be formed in a known manner from a suitable, known material, such as a steel. The coaction between bar **22** and channels **26** permits plate **20** to be mounted on the transom **14** of the boat **10** for pivotal movement about a horizontal axis which is parallel to transom **14**. Proper design of the various elements will permit plate **20** to be pivoted from the trolling position shown in full line in the drawings to a position permitting normal speeds of boat **10**, as is shown in broken lines in FIG. 4 of the drawings. Plate **20** may also be adjusted for various depths in the water by sliding bar **22** in channel **26**. The differences in position are shown by the broken lines in FIGS. **1** and **4** of the drawings.

Spring channels **26** form clamp portions **28** at one end thereof for permitting the attachment of spring channels **26** to transom **14**. Conventional winged screws **30** are threaded through channel **26** in portion

28 thereof and are provided with a clamping disc 32 for engaging transom 14 and retaining the trolling board 18 thereon.

A handle 34 is provided in plate 20 to assist in sliding plate 20 in channel 26. Plate 20 may be moved from the full line position shown in FIG. 4 of the drawings to the vertical broken line position shown therein merely by applying force thereto as by a human hand. This permits boards 18 to be adjusted to different sized transoms, as well as the adjustment of the drag.

Once boards 18 are mounted on transom 14 and wing screws 30 are tightened down, bar 22 may be positioned in channels 26 with the aid of handle 34. Boards 18 may be placed adjacent motor 16, or at any distance up to the limit of transom 14. Channels 26 grip bar 22 and will hold it in a desired sliding position. If plate 20 is not already in the vertical position, it may be so placed by applying pressure thereto as by a human hand. With plate 20 in a desired vertical position, trolling can now be done. In the event that the boat passes over an obstruction in the water, plate 20 will be forced backward and moved to its horizontal or broken line position. Advancing the throttle of motor 16 will also accomplish this. The square cross section of bar 22 will cause bar 22 to snap into a position 90° from its original position. This feature of the present invention provides an important safety factor. Maintenance such as lubrication is unnecessary.

Since boats are manufactured in many different sizes and can be mounted with motors or engines of various horsepower, the size of the trolling boards would be determined by the size of the boat and the horsepower of the motor.

When used with a boat with an outboard motor, as shown in FIG. 1 of the drawings, trolling boards 18 would be mounted on transom 14 as shown. For an inboard-outboard boat, trolling boards 18 would be fastened permanently thereto in a known manner, such as by fastening channels 26 with screw fasteners. Bolts and nuts are preferable. In this event, clamping portion 28 would be eliminated. The reason for permanently mounting the trolling boards 18 to an inboard-outboard type of boat is that the transom thereof can be and is built at different angles, and this necessitates the trolling boards becoming a part of the boat. The exact angle of the transom would not impair the efficiency of the trolling boards 18 in any way. Further, some boats have a rear deck which prohibits the use of clamps.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

I claim:

1. A trolling apparatus adapted for mounting on the transom of a power-driven boat, comprising in combination:

a pair of vertically extending, laterally spaced-apart channel means having attachment means for mounting on a boat transom;

a horizontally disposed, elongate cross member having each end thereof adapted for mounting respectively in each channel means, so that the cross member can be moved along the pair of channel means in a direction transverse to the longitudinal axis of the cross member;

an elongate plate member rigidly attached at one end thereof to the horizontal cross member and extending downwardly, said plate member being adapted to move in a vertical direction, when the cross member is moved along the pair of channel means;

mounting means for slideably mounting each end of the cross member respectively in each channel means, said mounting means adapted to provide for rotation of the cross member about its longitudinal axis when a force in excess of a predetermined force is applied to the plate member;

control means for varying the vertical disposition of the plate member relative to the pair of channel means.

2. A trolling apparatus as set forth in claim 1, wherein the cross member and the plate member are of unitary construction.

3. A trolling apparatus as set forth in claim 1, wherein a pair of the trolling apparatus are adapted for mounting in spaced-apart relationship on the transom of a boat.

4. A trolling apparatus as set forth in claim 1, wherein the cross member has a rectangular cross-section and the mounting means includes spring channel means for slideably and pivotally receiving the cross member.

5. A trolling apparatus as set forth in claim 4, wherein there are a pair of trolling apparatus symmetrically mounted on the transom of the boat.

6. In combination, a boat hqving a transom, and a trolling apparatus comprising in combination: a plate for creating adjustable drag and retarding the movement of the boat through water; a longitudinally extending bar having a rectangular cross-section connected to one edge of the plate; spring channel means for slideably and pivotally receiving the bar for movement in a plane transverse to the longitudinal axis of the bar, and for pivotal movement about a horizontal axis which is parallel to the transom of the boat when a force in excess of a predetermined force is applied to the plate; and means for attaching the spring channel means to the transom of the boat.

7. A structure as set forth in claim 6, wherein there are a pair of trolling apparatus symmetrically mounted on the transom of the boat.

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