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O. LITSHEIM

3,312,186

SHIP PROPELLING MEANS

Filed Aug. 27, 1965

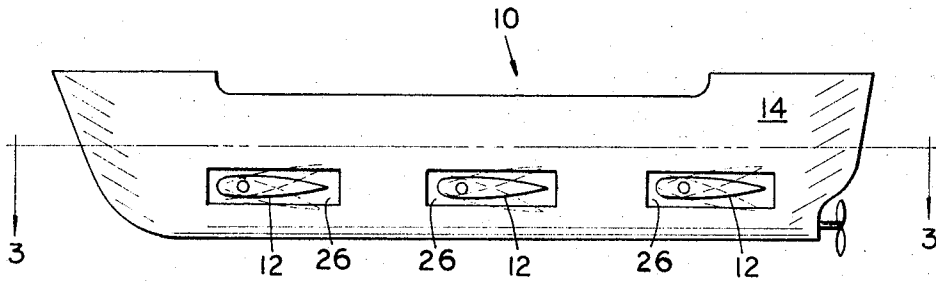


FIG. 1.

FIG. 2.

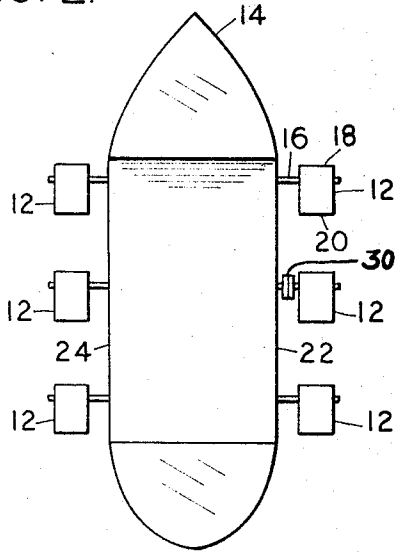


FIG. 3.

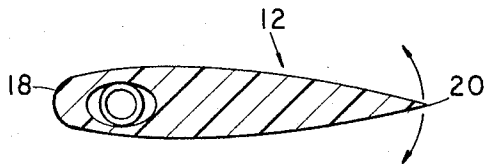
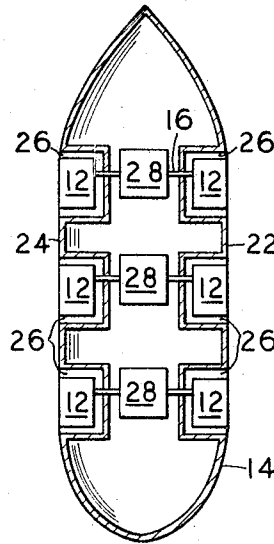


FIG. 4.

INVENTOR  
OLAV LITSHEIM  
BY HIS ATTORNEY

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3,312,186

**SHIP PROPELLING MEANS**

Olav Litsheim, P.O. Box 392, Rockaway, N.J. 07866

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1 Claim. (Cl. 115-4)

This invention relates to a ship propelling means and more particularly to means for moving a ship without the use of engines.

Heretofore, when ships on the high seas have lost power, through engine failure and the like, the ship was left to the mercy of the ocean. It had been known that many ships have lost power and were subsequently lost at sea because they had lost all means of propulsion. If these ships had been able to move many of them would have been saved, especially those lost in high seas.

Often when a ship is floundering in high seas, if it were able to move and turn "into" the seas it would be able to ride out the storm. Unfortunately there are no presently available means to allow the ships to move, once its power has been lost.

It is the general object of the present invention to avoid and overcome these and other prior art difficulties by the provision of a ship propulsion means that will allow ships to move although their main power is lost.

Another object of the present invention is to provide a ship propulsion means which may be extended for use when desired and retracted when not being used.

Yet a further object of the present invention is to provide a ship propulsion means which may provide movement of a ship in heavy seas when the main power is lost.

A further object of the present invention is to provide an inexpensive auxiliary ship propulsion means.

The aforesaid objects and other objects which will become apparent as the description proceeds are achieved by providing a ship propulsion means comprising a plurality of fins mounted along the sides of the ship, a retractable shaft connected to the fins for allowing the fins to move, the fins being retractable into the hull of the ship, a housing means in the hull of the ship for housing the fins when not in use, and hydraulic means for extending and retracting said fins.

For a better understanding of the present invention reference should be had to the accompanying drawings, wherein like numerals of reference indicate similar parts throughout the several views and wherein:

FIGURE 1 is a side view of a ship showing the positioning of the fins,

FIGURE 2 is a top view of the ship showing the fins in their extended position,

FIGURE 3 is a cross section of the hull of the ship taken along lines 3-3 of FIGURE 1 but showing the fins in a retracted position, and

FIGURE 4 is a cross sectional view of one of the fins.

Referring to FIGURE 1, a ship is indicated generally by the reference numeral 10.

In order to propel a ship 10, after it has lost its main power a plurality of propulsion means or fins 12 may be provided along the sides of the ship. The fins 12 may be extended from the hull 14 of the ship 10 by means of a shaft 16 which is connected to each of the fins 12.

Structurally each fin 12 is broad at its leading edge 18 and tapers rearwardly to its trailing edge 20, as shown in FIGURE 4. The fins 12 cross section would resemble the cross section of an airplane wing. In order that the trailing edge 20 may move in an up and down motion, that is, have a reciprocating motion, the shaft 16 may movably support the fin 12 in such a manner that the trailing edge 20 may have a maximum reciprocating motion. Of necessity therefore the shaft 16 is mounted in the broad portion of the fin 12, near the leading edge 18.

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Ordinarily, a ship on the high seas will have imparted to it a side to side rolling motion, due to the ocean currents and the fact that waves or ocean swells are present. This side to side rolling motion, as well as the normal pitching motion may be utilized, in conjunction with the fins 12, to provide the propulsion of the ship 10. More specifically, the propulsion means or fins 12 may be disposed at approximately the water level of the ship 10 and extended from the hull 14. When a ship 10 has lost its power and is floundering, the rolling motion of the ship 10 will cause one side 22 of the ship 10 to be raised while the other side 24 is more deeply immersed in the water. At the time when the immersed fins 12 are being raised from the water the trailing edge 20 of the fin 12 is forced downwardly by the pressure of the water whereas the trailing edge 20 of the fins 12 on the other side 24 of the ship 10 is being forced upwardly because an upward pressure is being exerted since the downward motion of the hull 14 on that particular side of the ship 10. When the rolling action is repeated it may be seen that the fins 12 on each side of the ship have their trailing edges 20 "flapping" or reciprocating causing water to be moved and displaced rearwardly of the fins 12 and thereby causing the ship 10 to be propelled in a forward direction.

Since it is not necessary to use this type of propulsion means when the ship 10 is under power, the fins 12 may be stored or retracted until it is desired to use them. In order to accomplish this the hull 14 is provided with an indentation or housing means 26 for each of the fins 12 so that the fins 12 may be retracted into each of the respective indentations 26 when not in use. Other means for protecting the fins 12 when they are not in use may be provided such as an indentation 26 which may be protected by plates which may cover the indentation 26.

One convenient manner of retracting the fins 12 is to provide a shaft 16 which is telescopically extensible and retractable. The shaft 16 may be connected to a hydraulic means 28 which may operate the shaft 16, to extend it or retract it as desired. Since the use of this propulsion means is used primarily when there is a power loss or failure, gasoline engines or the like may be employed to serve as the power source for the hydraulic means 28.

In operation, when a ship 10 has lost its power and is floundering at sea, the hydraulic means 28 may be activated to telescopically extend the shaft 16. The fins 12 are moved from their respective protective indentations 26 in the hull 14 of the ship 10 to their extended positions, as shown in FIGURE 2. With the rolling of the ship 10, the trailing edges 20 of the fins 12 will oscillate, due to the pressure of the seas, about the shaft 16 thereby causing water to be displaced further causing the ship 10 to be propelled in the forward direction. When the ship's power is restored, the fins 12 may be retracted to their positions in the indentations 26.

It should be noted that at the point where the shaft 16 extends through the hull 14 of the ship 10 water tight bearings are used to prevent water seepage into the hull of the ship 10.

It may be noted that the fins 12 may be utilized even when the ship 10 has not lost power since the fins 12 in their extended position may aid in stabilizing the ship 10 in heavy seas, and if this is desirable a telescopic shaft 16 may not be necessary. In this case a rigid shaft might be employed utilizing a shaft coupling 30, as shown in FIGURE 2.

It will be recognized by those skilled in the art that the objects of the present invention have been achieved by providing a ship propelling means which will propel a ship which has lost power and which propelling means may be extended when needed and retracted when not in use.

I claim:

A ship propelling means for propelling a ship in water comprising a plurality of fins mounted along the sides of said ship, said fins being mounted so that they are immersed in the water, each of said fins being provided with a thick front end portion and tapering rearwardly to a thin rear end portion, an independently extensible and retractable shaft connected to the thick front end portion of each of said fins, the rear end of each fin being capable of oscillating about each of said independently extensible and retractable shafts, a housing means disposed within said ship to concealingly house said fins in their retracted position, and hydraulic means disposed within said ship and connected to each of said independently

extensible and retractable shafts for extending and retracting said fins.

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MILTON BUCHLER, *Primary Examiner.*

ANDREW H. FARRELL, *Examiner.*

UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

Patent No. 3,312,186

Dated April 4, 1967

Inventor(s) OLAV LITSHEIM

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the Patent:

Page 1, column 2, line 8 cancel "at approximately"  
substitute therefor --below--.

In the application:

Page 3, line 21 cancel "at approximately" substitut  
therefor --below--.

SIGNED AND  
SEALED  
MAY 26 1970

(SEAL)

Attest:

Edward M. Fletcher, Jr.  
Attesting Officer

WILLIAM E. SCHUYLER, JR.  
Commissioner of Patents