Nov. 3, 1964 L. STRUMSKIS 3,155,065

SHIP STABILIZER

Filed May 3, 1963

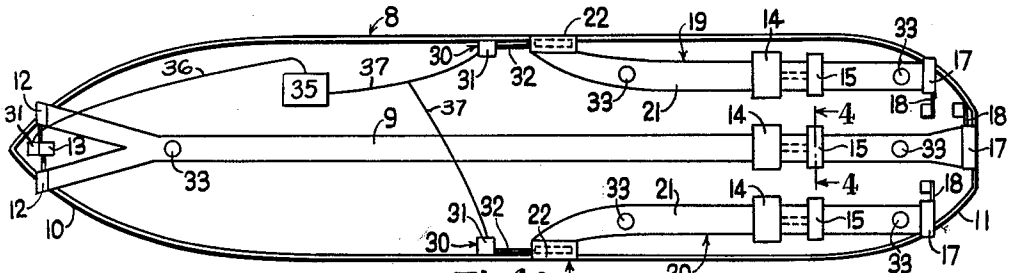


Fig. 1

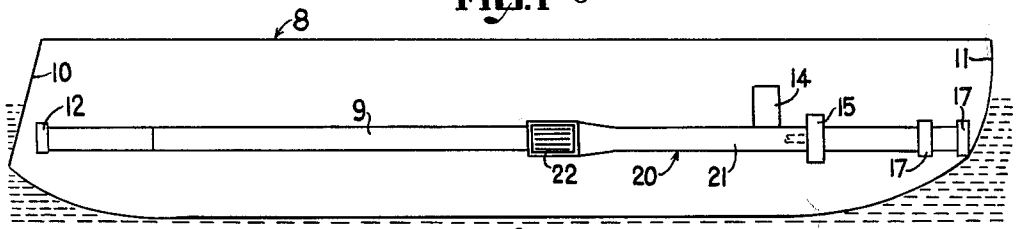


Fig. 2

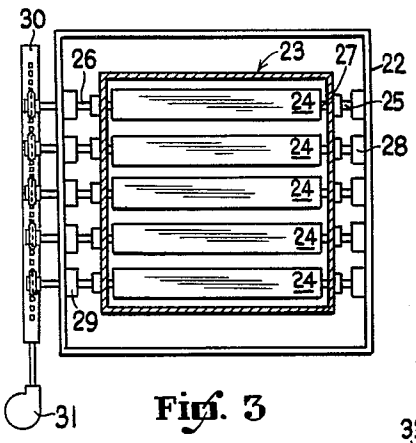


Fig. 3

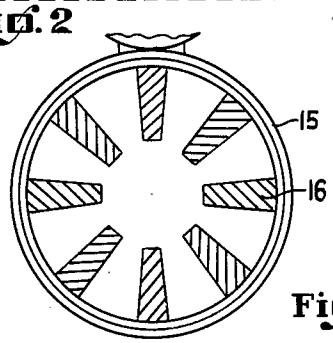


Fig. 4

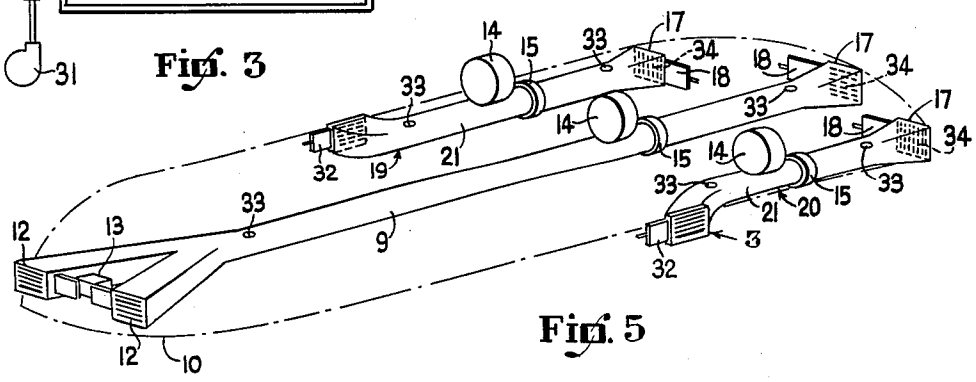


Fig. 5

INVENTOR

Louis Strumskis.

United States Patent Office 3,155,065 Patented Nov. 3, 1964

3,155,065

SHIP STABILIZER

Louis Strumskis, P.O. Box 101, Sparr, Fla.

Filed May 3, 1963, Ser. No. 277,858
5 Claims. (Cl. 114—122)

This invention relates to ship construction and, more particularly, to structure and mechanism that will not only prevent the roll and pitch of ships, but also provide a new method of both propelling and steering ships at low as well as at high speeds, and the elimination of cavitation found in ordinary propellers at high speeds.

The many well-known improvements that have been made throughout the years in ship stabilization, propulsion, and steering are too well-known by those experienced in the art to need even briefly mentioning here; however, it should be noted that my invention is based upon a well-known but never before tried concept insofar as actual structure is concerned, as will be hereinafter described.

It is the principal object of my invention to provide a ship stabilizer that is operated by the action of the water passing through certain conducting pipes, as will be hereinafter described.

Another object of this invention is to provide a ship stabilizer that has its stabilizing movements made with a hydraulic jack activated by a gyroscope.

Another object of this invention is to provide a ship stabilizer in connection with the propelling mechanism that will eliminate cavitation found in the ordinary propeller movement at high speed.

Another object of this invention is to provide a ship stabilizer that is so constructed as to also do away with the necessity of a rudder for steering by reason of the action of the water passing through the pipes and acting on the fins, as will be described in detail later on in this specification.

Still another object of this invention is to provide a ship stabilizer that can readily be adapted to any ship now in use with but a minimum of modification to the ship's structure and mechanism.

Other and further objects and advantages of this ship stabilizer will be hereinafter described, and the novel features thereof defined in the appended claims.

Referring to the drawing:

FIGURE 1 is a top view of a typical hull of a ship with this invention installed in the same.

FIGURE 2 is a side view of a ship showing this invention installed on the same.

FIGURE 3 is a side view of the stabilizing fins and their hydraulic jack as indicated by the arrowed line and numeral 3 on FIGURES 1 and 5.

FIGURE 4 is a sectional view taken along line 4—4 of FIGURE 1.

FIGURE 5 is a perspective view of this invention in the bottom of a ship, the outline of which is shown in phantom lines.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Having reference now to the drawing in detail, there is generally indicated by the character **8** a ship's hull in which is located a water conducting tube **9** that extends from the bow **10** of the ship to the stern **11**. The tube **9** is Y-shaped at the bow and is provided with a pair of parallel and spaced, forward facing openings **12**, to which is connected a sliding gate mechanism **13** that controls the amount of water entering the aforesaid conducting tube **9**. A suitable power supply unit **14** of any desired type is located just above the tube **9** which is provided with a propeller housing **15** having a propeller **16** of the multiple blade type located therein. The power supply unit and the propeller and housing are located in the

stern portion of the ship. The aforesaid conducting tube terminates at the stern in an outlet **17** having a sliding door valve **18**.

A separate stabilizing unit **19** is located on one side of the ship, while an alike stabilizing unit **20** is located on the other side of the ship. Each stabilizing unit embodies a conducting tube **21** having a water inlet **22** on the forward end thereof. Each water inlet comprises a fin supporting structure **23**, in which is located a plurality of fins **24** having a supporting shaft **25** at one end thereof and a second supporting shaft **26** at the opposite end of the fin **24**. The supporting shaft **25** terminates in a bearing housed in a cap **28**, while the supporting shaft **26** passes through a bearing **29** and terminates in a hydraulic jack operating mechanism **30** that is operated by the hydraulic jack **31**, which is activated by a gyroscope **35**. One takeoff from this gyroscope is connected by line **36** to the hydraulic jack **31** in tube **9** and another takeoff is connected by lines **37** to hydraulic jacks **31** in tubes **19** and **20**. This gyroscope operates the jacks in a conventional manner well known in the ship stabilization art. A sliding gate **32** is so adapted to the water inlet **22** as to permit repairs to any one stabilizing unit while the ship is in motion. A manhole **33** is also located in the top of the water conducting tubes **9** and **21** near the front end of the tube, and an alike manhole is in the top of the rear portion of the same tubes, as clearly shown in FIGURES 1 and 5 of the appended drawing. The purpose of these manholes is, of course, to permit one to clean out and/or repair the tubes whenever necessary.

While the structural components of this invention have been described both in detail and in relation to each other, one must realize that changes may be made in the same and the invention will still come within the limitations of the appended claims. For example, the power supply unit can very well be eliminated as it is thought of in the usual sense, and the propellers **16** can be rotated by steam acting directly on the propeller housing **15** in a manner similar to steam turbines. The pitch of the propeller blades can be automatically adjusted to any forward or reverse movement without the necessity of stopping its rotational movement. The feathering of the propeller blades is sometimes desired and can, of course, be done by mechanism well known in the art when one desires constant speed for high efficiency. The feathering of the propellers of a ship would be similar to the feathering of the propellers of an airplane. The main source of the ship's thrust, aside from the "pull-push" effect of the water flowing through the tubes on the water outside the ship, is the "biting" effect of the rotating propeller blades on the water; therefore, bearings (not shown in the drawing) are placed externally on either side of the aforesaid housing **15**, in order to support the constant thrust produced by the propeller.

For more efficient guiding or steering of a ship than is possible with the present well-known rudder system, the blades **34** that are located in the outlets **17** may be mounted vertically, even while there is no forward or backward movement of the ship, if the water in the center tube, that is, the conducting tube **9**, is caused to flow in reverse.

It may be well to remark at this time that the water inlets **22**, which are parallel to the ship's side, do not protrude and in any way interfere with the docking of the ship, but rather help the docking by eliminating the use of tug service. The fins **24** located within the aforesaid water inlets **22** on each side of the ship obviously control the roll of the ship on which they are located, since these fins will operate inversely to each other at the automatic command of the already mentioned gyroscopes. The novel way in which the fins **24** are parallel to the side of the ship will naturally reduce the rolling motion of the ship without the necessity of reducing the ship's speed in order to

reduce the side shock that is created by the use of the wing-type stabilizers.

As changes in the construction could be made within the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A ship stabilizer of the character described, comprising three water conducting tubes mounted within the hull of a ship, one of the said tubes extending from the bow to the stern of the said ship, and each of the two remaining tubes mounted on each side of the said ship, and each tube having a mechanically controlled water inlet and a water outlet having a plurality of blades therein, and a propeller of the multi-blade type mounted within each one of the said tubes, and a power unit operating each propeller, and the mechanical mechanism of each water inlet on the side of the said ship being automatically operated by a gyroscope, thereby providing automatic stabilization of the said ship.

2. A ship stabilizer of the character described, comprising three water conducting tubes mounted within the hull of a ship, one of the said tubes extending from the bow to the stern of the said ship, and each of the two remaining tubes mounted on each side of the said ship, and each tube having a mechanically controlled water inlet and a water outlet having a plurality of blades therein, and a propeller of the multi-blade type mounted within each one of the said tubes, and a power unit operating each propeller, and the mechanical mechanism of each water inlet embodying a plurality of swingably mounted, horizontally disposed fins in equal vertical-spaced relation to each other, the said fins being mechanically connected to a hydraulic jack automatically operated by a gyroscope, thereby providing automatic stabilization of the said ship.

3. A ship stabilizer of the character described, comprising three water conducting tubes mounted within the hull of a ship, one of said tubes extending from the bow to the stern of the said ship, and each of the two remaining tubes mounted on each side of the said ship, and each tube having a mechanically controlled water inlet and a water outlet having a plurality of blades therein, the said outlet blades of said two remaining tubes being mounted vertically, thereby providing an improved means of steering the said ship, and a propeller of the multi-blade type mounted within each of one of the said tubes, and a power unit operating each propeller, and the mechanical mechanism of each water inlet embodying a plurality of swingably mounted, horizontally disposed fins in equal vertical-spaced relation to each other, the said fins being mechanically connected to a hydraulic jack automatically operated by a gyroscope, thereby providing automatic stabilization of the said ship.

4. A ship stabilizer of the character described, comprising three water conducting tubes mounted within the hull of a ship, one of the said tubes extending from the bow to the stern of the said ship, and each of the two remaining tubes mounted on each side of the said ship, and each tube having a mechanically controlled water inlet and a water outlet having a plurality of blades therein, the said outlet blades of said two remaining tubes being mounted vertically, thereby providing an improved means of steering the said ship, and a propeller of the multi-blade type mounted within each one of the said tubes, and a power unit operating each propeller, and the mechanical mechanism of each water inlet embodying a plurality of swingably mounted, horizontally disposed fins in equal vertical-spaced relation to each other, the said fins being mechanically connected to a hydraulic jack automatically operated by a gyroscope, thereby providing automatic stabilization of the said ship, and each said water inlet having a sliding door valve therein, thereby providing a means of preventing water from entering the water conducting tubes while they are being repaired or cleaned out, and a manhole in the upper and forward and rearward ends of each of the three water conducting tubes, the manholes also providing a means of maintenance of the inside of the said water conducting tubes.

5. A ship stabilizer of the character described, comprising three water conducting tubes mounted within the hull of a ship, one of the said tubes being Y-shaped at the bow of the said ship and extending from the bow to the stern of the said ship, and each of the two remaining tubes mountd on each side of the said ship, and each tube having a mechanically controlled water inlet and a water outlet having a plurality of blades therein, the said outlet blades of said two removing tubes being mounted vertically, thereby providing an improved means of steering the said ship, and a propeller of the multi-blade type mounted on bearings and within each one of the said tubes, and a power unit operating each propeller, and the mechanical mechanism of each water inlet embodying a plurality of swingably mounted, horizontally disposed fins in equal vertical-spaced relation to each other, the said fins being mechanically connected to a hydraulic jack automatically operated by a gyrosope, thereby providing automatic stabilization of the said ship, and each said water inlet having a sliding door valve therein, thereby providing a means of preventing water from entering the water conducting tubes while they are being repaired or cleaned out, and a manhole in the upper and forward and rearward ends of each of the three water conducting tubes, the manholes also providing a means of maintenance of the inside of the said water conducting tubes.

No references cited.