O. W. COBB.

AUXILIARY PROPULSION MECHANISM FOR BOATS.

APPLICATION FILED AUG. 2, 1916.

1,247,082. Patented Nov. 20, 1917.

2 SHEETS—SHEET 1.

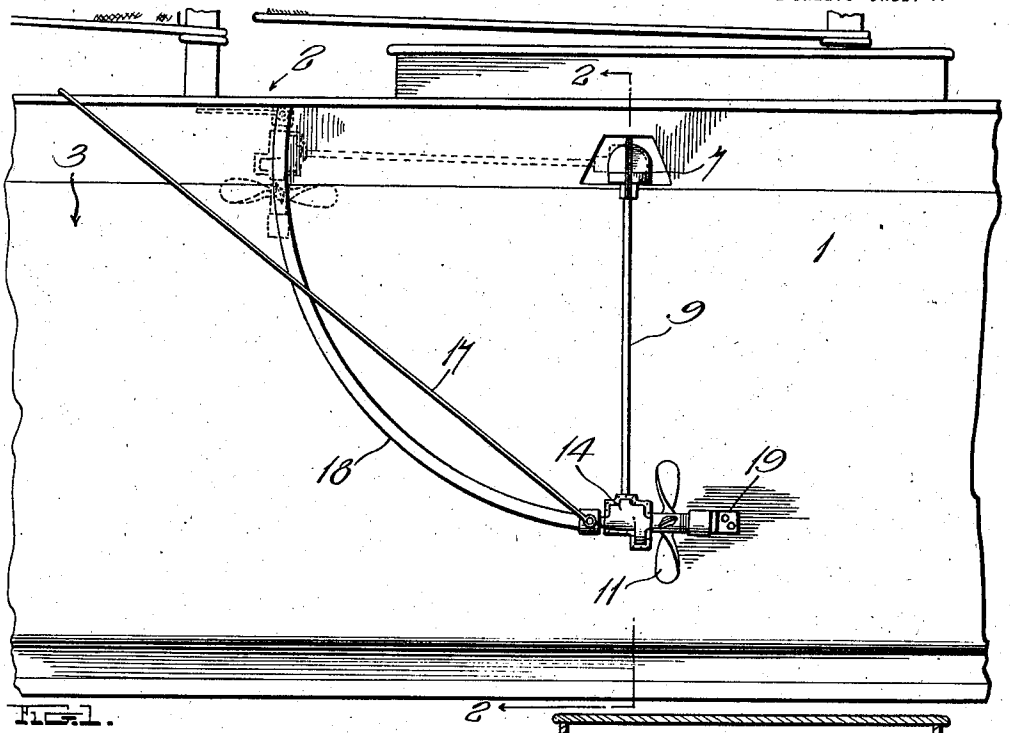


FIG. 1.

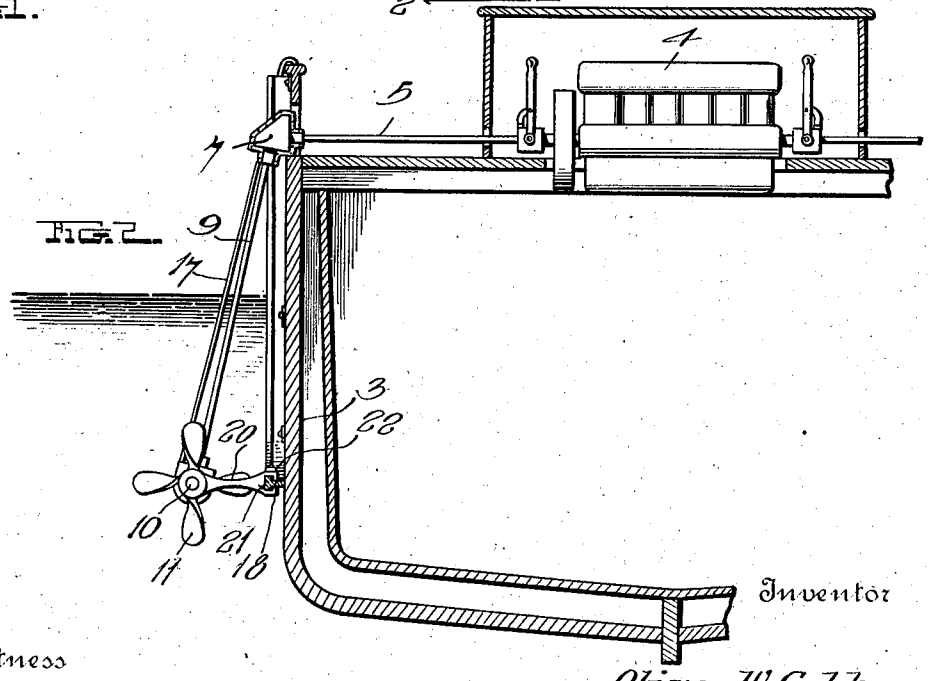


FIG. 2.

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2 SHEETS—SHEET 2.

FIG. 3.

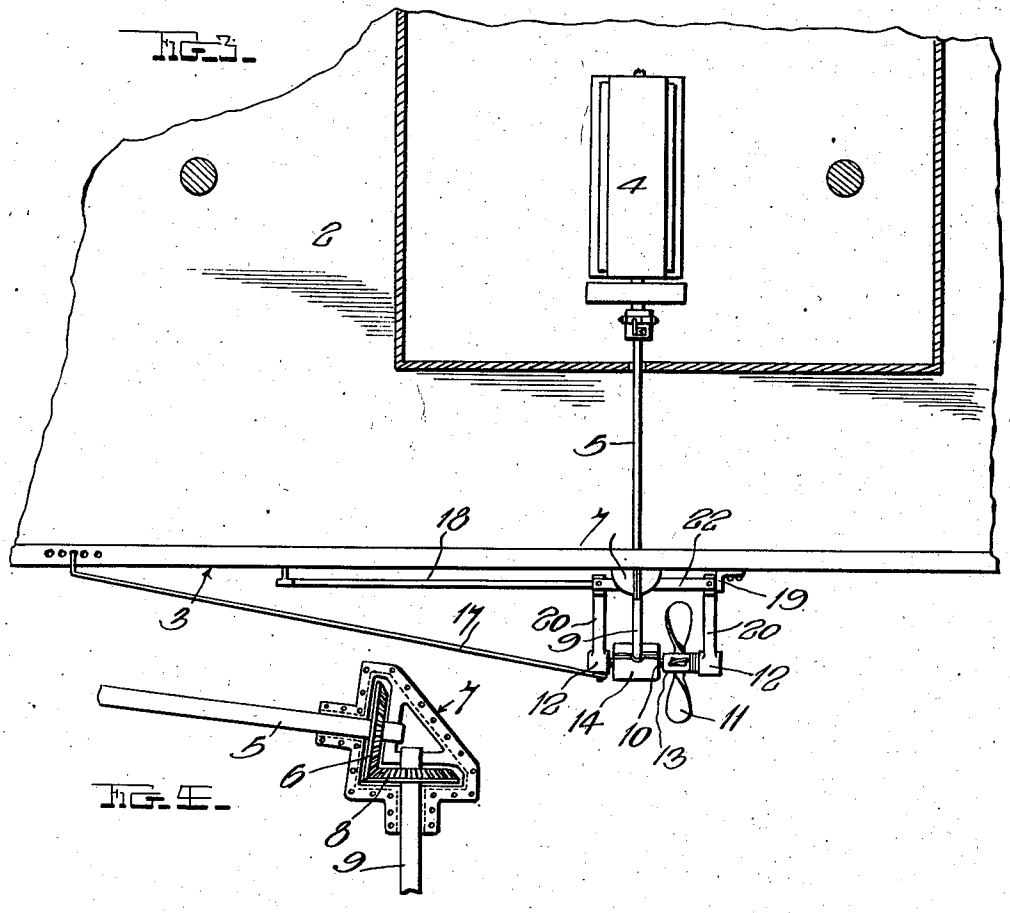


FIG. 4.

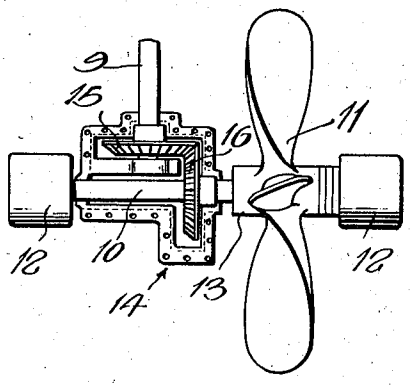


FIG. 5.

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AUXILIARY PROPULSION MECHANISM FOR BOATS.

1,247,082. Specification of Letters Patent. Patented Nov. 20, 1917.

Application filed August 2, 1916. Serial No. 112,805.

To all whom it may concern:

Be it known that I, OLIVER W. COBB, a citizen of the United States, residing at Easthampton, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Auxiliary Propulsion Mechanisms for Boats; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to propulsion means for vessels and particularly auxiliary driving means which can be thrown into operation at will.

The principal object of the invention is to provide a device which can be secured to the sides of vessels, particularly sailing boats, in order to supplement the main propelling apparatus to increase the speed of the boat or for use when said apparatus gets out of order or for any reason cannot be used.

A secondary object of the invention is to provide such a device as above mentioned which can be normally carried above the water and quickly lowered into operative position when it is desired to use the same.

With these and many other objects in view, my invention resides in the novel features of construction, combination and arrangement of parts which will be hereinafter more particularly described and claimed.

In the accompanying drawings:—

Figure 1 is a side elevation of a portion of a sailing vessel showing my improved auxiliary propeller applied thereto;

Fig. 2 is a vertical transverse section on the plane of the line 2—2 of Fig. 1;

Fig. 3 is a plan view of the parts shown in Fig. 1;

Fig. 4 is a detail view of one of the gear cases, one side thereof being removed so as to show the interior construction; and

Fig. 5 is a side elevation of the propeller carriage showing the outer or cover portion of the gear case removed.

Referring more particularly to the drawings, the numeral 1 designates the hull of an ordinary sailing vessel which is provided with a main deck 2 in which the masts for the sails are partially supported. The sides of the vessel are designated by the numeral 3, and it is upon the flat portions of these sides that I attach my improved auxiliary propulsion mechanism. The mechanism may be disposed on either or both of the sides 3 and at any desired distance from the bow or stern.

The propulsion mechanism to be presently described is driven by means of an engine 4, of any suitable type, but preferably of the internal combustion form. In the accompanying drawings, I have shown only one of the mechanisms and the engine 4 therefor is disposed substantially in the middle of the main deck 2, a power shaft 5 being extended transversely across the deck of the vessel from the engine to one side 3. The outer end of the shaft 5 projects slightly beyond the side 3 of the vessel and is provided with a bevel gear 6 which is disposed in a suitable gear casing or housing 7.

The gear 6 meshes with an additional bevel gear 8 also disposed within said casing 7, the last mentioned gear being fixed to a driving shaft 9 to whose lower end the propulsion mechanism proper is connected. When the propulsion mechanism is active the shaft 9 is substantially vertical as shown at Fig. 1.

The mechanism with which the lower end of the shaft 9 is connected consists of a driven shaft 10 whose axis is preferably disposed at right angles to the axis of the shaft 9, a propeller 11 fixed to said shaft, and thrust bearings 12 disposed on the opposite ends of said shaft 10. The hub 13 of the propeller abuts the forward bearing 12 while disposed between the rear face of said hub and the rear bearing 12 is a gear casing 14. This casing contains a pair of bevel gears 15 and 16, the former being fixed to the lower end of the shaft 9 while the latter is carried by the intermediate portion of the shaft 10, said gears being normally in mesh so that operation of the engine 4 causes the propeller 11 to rotate.

In order to retain the propulsion mechanism in its lowered position with the shaft 9 substantially vertical, a brace bar 17 is provided, the latter being pivoted at one end to the rear bearing 12. The upper end of this bar is designed to be fixed by any preferred means to the side of the vessel adjacent the deck thereof, and in addition to acting as a brace rod, it also provides means for lifting the propulsion mechanism when it is desired to raise the same out of the water so as to render it inactive. It is obvious that when

the mechanism is lifted by means of the rod 17, it is moved around the axis of the power shaft 5.

Since there is liable to be a tendency for the propulsion mechanism to move outwardly away from the sides of the vessel, both when it is in operation and when lifted to inactive position, a track 18 is provided, the same being curved and disposed concentric to the axis of the power shaft 5. This track is substantially T-shaped in cross section and is secured by any preferred means to the side of the vessel. An attaching bracket 19 is, however, formed on the lower end for attaching the same and is designed to provide a stop against which the front end of the propulsion mechanism abuts when it is in active position. The brace bar 17 holds the mechanism in engagement with the stop formed by the bracket 19 and the track 18 prevents the outward movement thereof. Thus, the device is held in a rigid position when in operation.

While any preferred means may be used for holding the carriage which comprises the propulsion mechanism into engagement with the track 18, that shown and preferably used consists of a pair of arms 20, one of which is carried by and projects inwardly from each of the bearings 12. These arms are provided with heads on their free ends which have slots 21 formed therein to receive the head of the T-shaped track. By these means it will be seen that when the brace bar 17 is used to raise the carriage in which the propeller 11 is mounted, the arms 20 will slide on the track 18 and effectively guide the device to its raised position. While not absolutely essential, a brace 22 may be used to connect the heads of the arms 20 so as to make them more rigid.

From the foregoing description taken in connection with the accompanying drawings, it is obvious that the device shown may be applied to any type of vessel in order to aid the main driving means therefor. Any desired or necessary changes may be made in the form and proportions of the several parts of the device without departing from or sacrificing any of the features of the invention.

I claim:

1. The combination with a vessel, of a power shaft extending transversely of said vessel, a curved track arranged concentric to the axis of said shaft and secured to a side of the vessel and parallel therewith, a carriage comprising arms slidably engaged over said track, a propeller mounted between said arms, a driving shaft connecting said propeller and the end of said power shaft, and a brace bar pivotally attached at one end to said carriage and adapted to hold the latter in active position, said brace bar also being used for raising and lowering said carriage.

2. The combination with a vessel, of a power shaft extending transversely of said vessel, a curved track T-shaped in cross section and secured to the side of said vessel, an attaching bracket at the lower end of said track to form a stop, a carriage on said track and comprising a propeller shaft, a propeller thereon, bearings at the opposite ends of said shaft, an arm extending from each of said bearings, and a head on each arm, said heads being disposed around said track, a rigid driving shaft connecting said propeller shaft and said power shaft, and a brace bar pivotally attached at one end to one of said bearings and adapted to hold said carriage in active position, said bar also being used for raising and lowering said carriage.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

OLIVER W. COBB.

Witnesses:
ELOISE E. LOCKE,
MERRILL E. TORREY.