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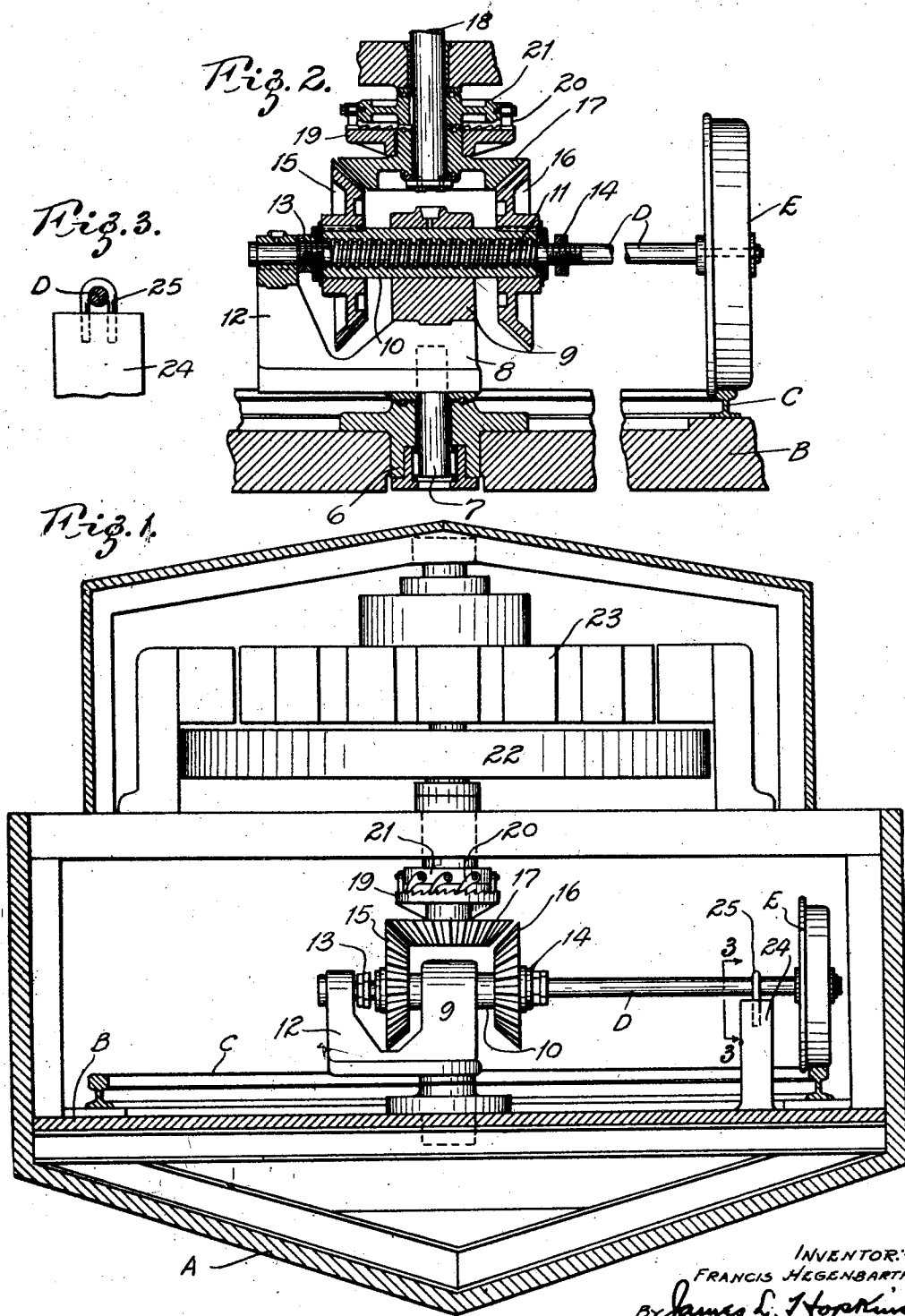
1,682,176

F. HEGENBARTH

WAVE MOTOR

Filed Dec. 12, 1925

2 Sheets-Sheet 1



INVENTOR:
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Fig. 4.

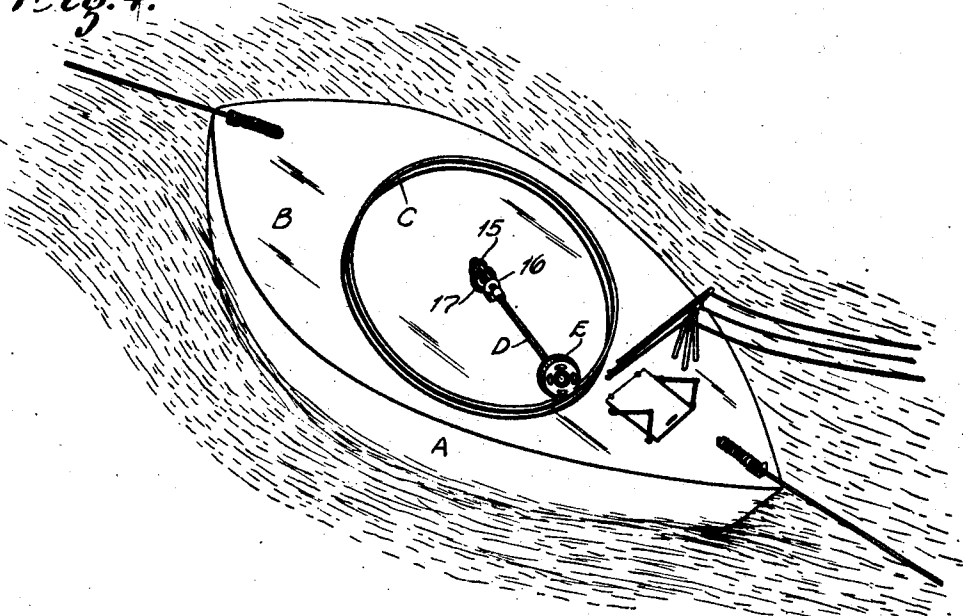
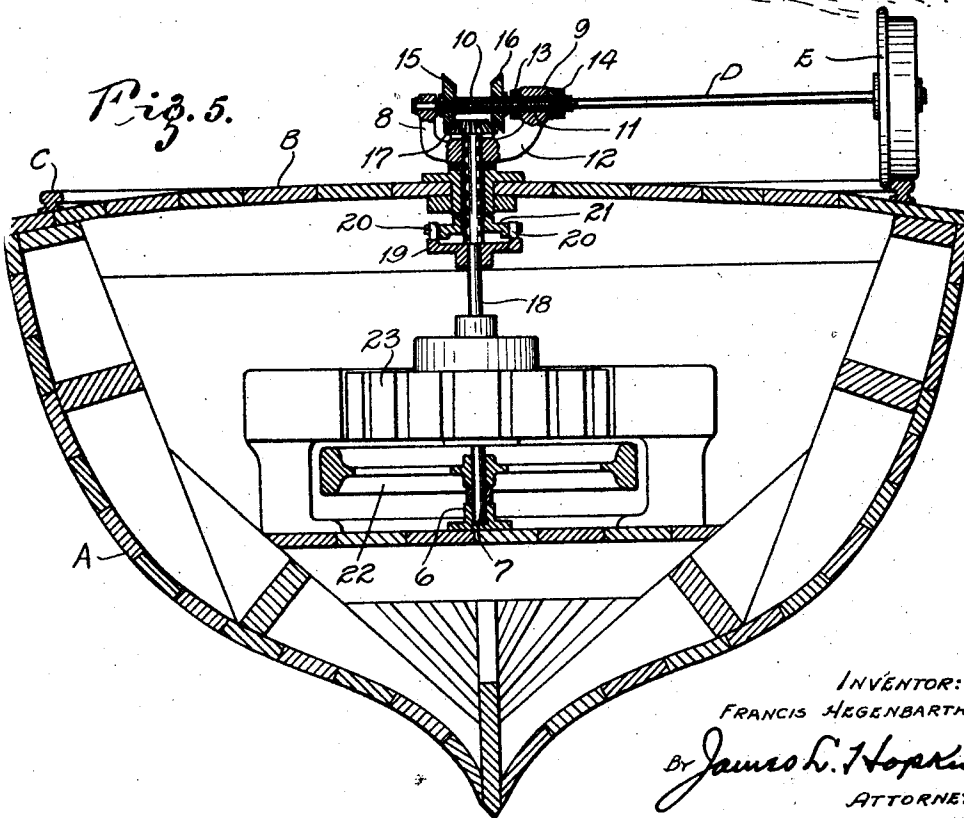


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANCIS HEGENBARTH, OF ST. LOUIS, MISSOURI.

WAVE MOTOR.

Application filed December 12, 1925. Serial No. 74,921.

My invention relates to improvements in wave motors and has for its object to provide a motor especially adapted for installation in a floating hull and wherein the movement of a rotor, mounted on a circular track carried by such floating hull, and fixed upon the outer end of a driving shaft, imparts power to a driven shaft, through suitable gearing. The connections between the driving shaft and driven shaft are such that the latter will be driven in but one direction regardless of whether the rotor and driving shaft are rotated in a clock-wise or a counter-clock-wise direction.

The motor of my invention is well adapted for use in serving as an auxiliary motor upon sailing ships or in connection with ships driven by other power.

Drawings.

In the drawings—

Fig. 1 is a side elevation of an apparatus embodying my invention in place within a hull, the hull being shown in vertical cross-section.

Fig. 2 is a fragmental enlarged view of said apparatus, parts being shown in section.

Fig. 3 is a side elevation of the lock employed when the apparatus is idle.

Fig. 4 is a perspective view of a floating hull equipped with an apparatus embodying my invention, with the rotor mounted above the hull.

Fig. 5 is a transverse sectional view of the hull and motor shown in Fig. 4.

Description.

In the hull A and upon the deck B the circular track C is mounted. Concentrically within the track C is a trunnion bearing 6 carrying the vertical trunnion 7, on which trunnion 7 the rotating base block 8 is mounted. The block 8 has a central standard 9 in which the threaded sleeve 10 is fixed, as shown, to accommodate the threaded portion 11 of the driving shaft D. The block 8 has at its outer end a standard 12 in which is journaled the inner end of the driving shaft D. Fixed at the outer end of the driving shaft D, and traveling upon the circular track C is the rotor E.

Mounted on the driving shaft D are stops 13 and 14 to limit the movement of the sleeve 10 upon the shaft D.

The sleeve 10 has fixed at its ends the bevel-gears 15 and 16, arranged to alternately

mesh with the bevel-gear 17 loosely mounted on the driven shaft 18 and arranged to rotate the driven shaft 18 through the rack-wheel 19 (fast on the bevel-gear 17) and the pawls 20, carried by the pawl-wheel 21 (that wheel 21 being fast on the driven shaft 18).

By means of the mounting of the sleeve 10 as thus shown and described, the rotation of the rotor wheel E and shaft D, either in clockwise or counter-clock-wise direction will serve to drive the shaft 18 in one direction, the thread on the shaft D carrying the sleeve 10 back and forth, with the reversal of movement of the rotor E, to alternately engage the bevel gears 15 and 16 into operative engagement with the bevel gear 17.

A fly-wheel 22 is mounted on the shaft 18, as shown, and an armature 23, forming part of the generator, may be mounted directly on the shaft 18 as shown in Fig. 1.

When it is desired to mount the apparatus in a freight or passenger vessel it may be advantageous to have the track C mounted on an open deck, where the operation of the rotor E may be directed from the bridge of the vessel and the machine brought to rest when necessary. The rest position is secured by means of a standard 24 at the top of which the shaft D may be caught and held by means of the fork 25, disengagably mounted in the top of the standard 24 as shown in Fig. 3.

As shown in Figs. 1, 4 and 5, the track C may be below or above the fly-wheel 22, according to the particular installation (within the hull A, as in Fig. 1, or upon an exposed deck B, as in Figs. 4 and 5) desired; the moving parts in both cases are identical in function, mode of operation and result.

The mechanism employed in practicing my invention may be varied in structure without departure from my actual inventive concept as defined by the appended claims.

I claim:—

1. A wave motor comprising a circular track; a rotor arranged to travel on said track; a driven shaft; and means interposed between said rotor and shaft to drive said shaft in the same direction regardless of change of direction of the motion of said rotor.

2. A wave motor comprising a circular track; a rotor arranged to travel on said track; a driven shaft; and means interposed between said rotor and shaft to drive said shaft in the same direction regardless of change of direction of the motion of said

rotor, in combination with means for locking said rotor against rotation.

3. A wave motor comprising a circular track; a rotor arranged to travel on said track; a driven shaft; a fly-wheel mounted on
5 said driven shaft; and means interposed be-

tween said rotor and shaft to drive said shaft in the same direction regardless of change of direction of the motion of said rotor.

In testimony whereof I hereunto affix my
signature.

FRANCIS HEGENBARTH.