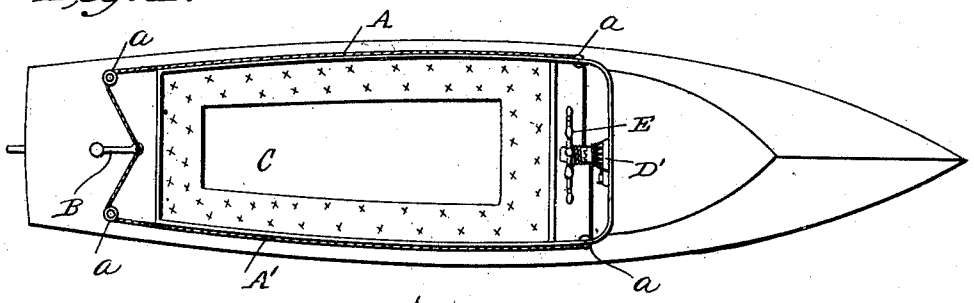
A. G. PARK.

BOAT STEERING GEAR.

APPLICATION FILED MAR. 29, 1909.

964,879. Patented July 19, 1910.

Fig. 1.



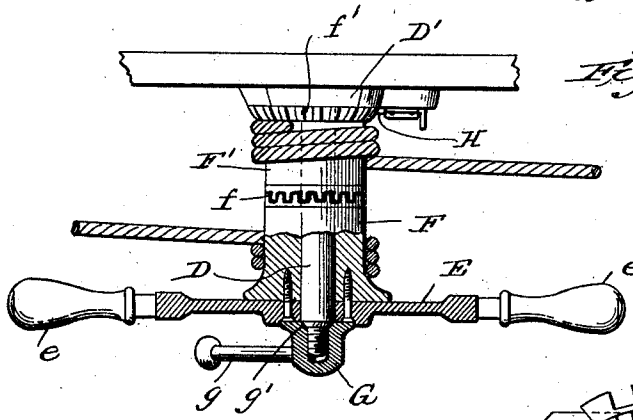


Fig. 2.

Fig. 4.

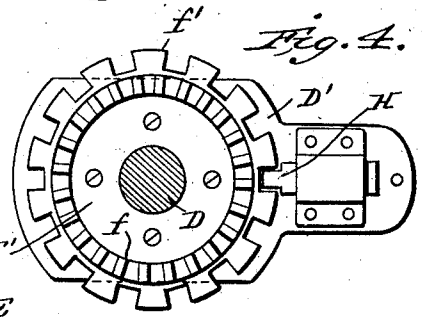
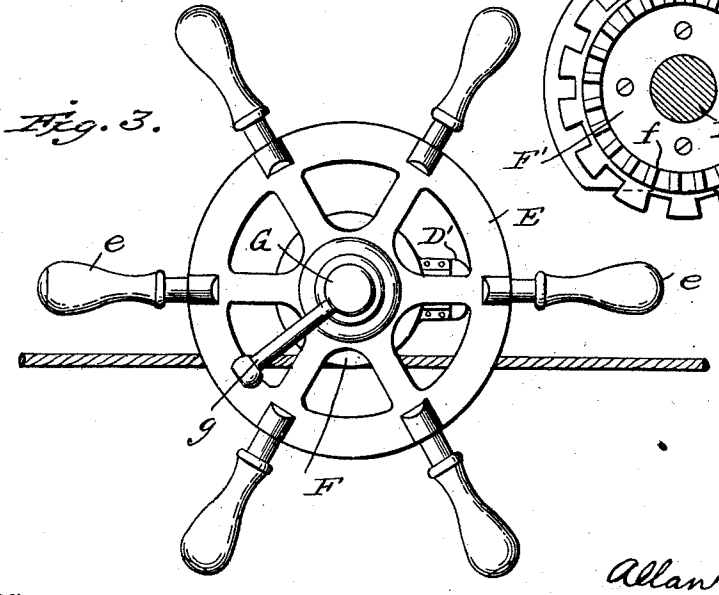


Fig. 3.



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BOAT-STEERING GEAR.

964,879. Specification of Letters Patent. Patented July 19, 1910.

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To all whom it may concern:

Be it known that I, ALLAN G. PARK, a citizen of the United States, residing at Madison, Dane county, Wisconsin, have invented certain new and useful Improvements in Boat-Steering Gear; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

The present invention relates to boat steering gear, and is particularly designed for use on motor boats or similar craft requiring a steady control of the rudder at all times.

The object of the invention is to provide a means whereby any slack in the tiller ropes may be taken up or the tension of the ropes adjusted at will, and the invention consists in certain novel details of construction and combinations and arrangements of parts, all as will be now described and pointed out particularly in the appended claims.

Referring to the accompanying drawings: Figure 1 is a top plan view of a motor boat having the invention applied thereto. Fig. 2 is an enlarged plan view partly in section of the steering wheel and drum. Fig. 3 is a front elevation, and Fig. 4 is an elevation with the steering wheel and front section of the drum removed and the central support or journal in section.

Like letters of reference indicate the same parts in all the views.

In the conventional arrangement of the parts illustrated in Fig. 1, it will be seen that the tiller ropes A and A′ extend from the tiller B, forwardly on each side of the cock pit C of the boat, and after passing around pulleys or idlers *a* extend transversely to the drum sections of the steering wheel, which latter is usually located at the front end of the cock pit.

The steering wheel itself lettered E in the accompanying drawings is of conventional form with the usual radial spokes or handles *e*, but in accordance with the present invention it is journaled on a pivot or journal D mounted rigidly on a base D′ adapted to be screwed or rigidly fastened to the boat structure. Between the steering wheel and base are the sections of the drum about which the tiller ropes are wound in opposite directions. These drum sections are preferably of substantially equal size, the forward section F being rigidly connected with the steering wheel E and the rear section F′ being loose on the central journal, but adapted to be separately connected with the front section and to be temporarily locked against rotation, as will be presently described.

The proximate faces of the sections F and F′ are provided with intermeshing teeth *f* to permit of the sections being adjusted angularly with relation to each other, and in order to permit of the disengagement of said teeth the front section F, together with the steering wheel E, is movable longitudinally on the pivot pin or journal, but is normally held against such movement by an adjustable cap G, which latter is preferably in the form of a nut screwed on to the end of the journal and having a handle *g* by means of which it may be rotated without the employment of a wrench. Any desired means may be employed for locking the cap against accidental rotation, but, as shown, the end of the journal is tapered slightly at *g′*, and the inner face of the nut or cap is adapted to wedge and bind against the tapered surface, thereby holding the parts with sufficient rigidity to prevent accidental turning of the cap when the wheel is rotated in one direction or the other.

When the cap is brought up to its seat, the wheel and drum sections are confined between it and the base D′, being thereby locked together for rotation in unison in order to simultaneously take up and pay out opposite reaches of the tiller rope in steering the boat.

In order to lock the drum and wheel against rotation, the rear section F′ of the drum is provided with a toothed or notched base *f′*, and the base or support D′ is provided with a sliding bolt H to enter the teeth or notches *f′*, as will be readily understood from an inspection of Fig. 4.

If one or both of the tiller ropes should stretch or elongate, the slack may be readily taken up as follows: The wheel and drum are rotated in a direction to wind the rope on the rear drum section until that rope is at the desired tension, when the lock is thrown into engagement for holding the drum. The cap G is then loosened, the forward

drum section moved longitudinally out of engagement with the rear drum section and the wheel and forward drum section are then rotated in a reverse direction until the rope connected with the front drum section is put under the proper tension. The two drum sections are then reëngaged and the cap G set up to hold them in engagement. When the lock is released it will be found that the tiller ropes are both properly tensioned, and it will be noted that with the arrangement described any slack in either rope may be taken up and the wheel set so as to always occupy the same position when the rudder is central or when the rudder is so set that the boat will be steered in a straight course.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent, is:

1. In a steering gear for boats, the combination with the steering wheel and tiller drum formed in sections provided with uniform peripheral faces in line with and abutting each other and having their proximate faces provided with intermeshing teeth for locking the sections together, said sections being movable longitudinally with respect to each other to disengage the teeth, of a journal on which said drum sections and wheel are mounted, and means for holding the drum sections against independent longitudinal movement when the sections are to move in unison and means for locking one section while the other is being adjusted.

2. In a steering gear for boats, the combination with the base having the forwardly extending journal, of the tiller drum formed in two independent sections rotatably mounted on said journal and having a clutch interposed between their proximate faces adapted to be released by an outward movement of the forward drum section, a steering wheel rigidly connected with the forward drum section, and a movable retainer coöperating with the journal for holding the forward drum section against outward movement in a direction to release the clutch.

3. In a steering gear for boats, the combination with the base having the forwardly extending journal, of the independent drum sections rotatably mounted on said journal and having a clutch interposed between their proximate faces, a steering wheel rigidly connected with the forward drum section, a movable retainer coöperating with the journal for holding the forward drum section against outward movement in a direction to release the clutch, and a lock for holding the inner drum section against rotation while the forward drum section is being angularly adjusted with relation thereto.

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