Jan. 11, 1944. A. J. HIGGINS 2,339,013

STEERING WHEEL

Filed Sept. 8, 1941

Fig. 1.

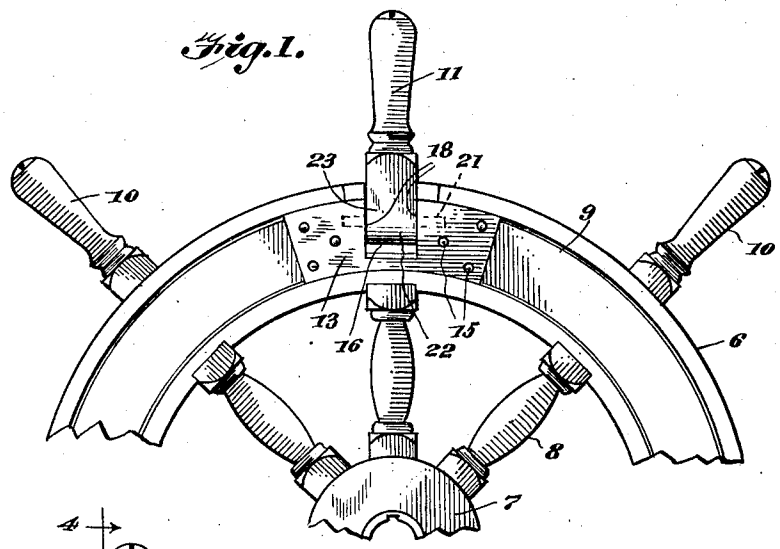


Fig. 2.

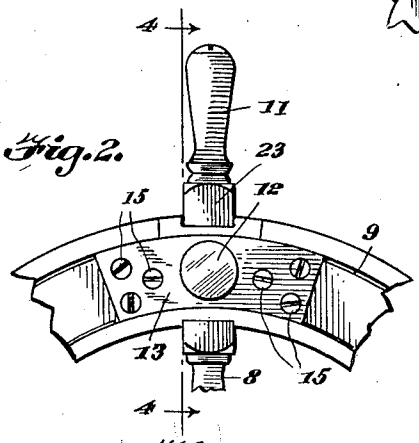


Fig. 3.

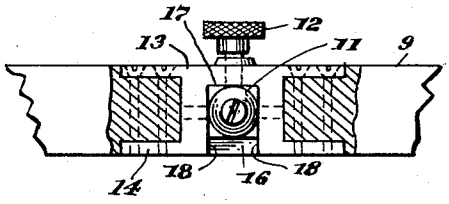


Fig. 4.

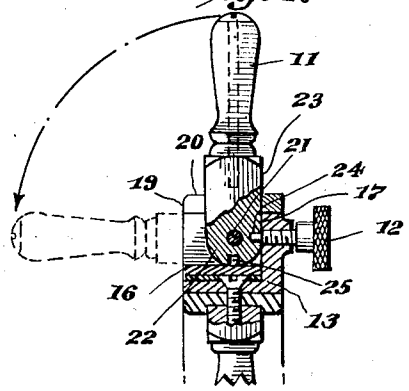
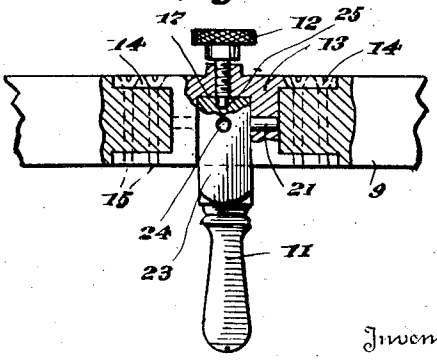


Fig. 5.



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Patented Jan. 11, 1944 2,339,013

UNITED STATES PATENT OFFICE

2,339,013

STEERING WHEEL

Andrew Jackson Higgins, New Orleans, La.

Application September 8, 1941, Serial No. 410,108

2 Claims. (Cl. 74—557)

This invention relates to improvements in marine steering wheels; and more particularly, to means for quickly facilitating the rotation of the wheel in either direction.

It is very essential especially on motor torpedo boats or other types of naval combat small craft, that frequent and rapid changes in course be made. With the conventional steering wheel it often takes several turns to bring the rudder from an extreme port position to the equivalent starboard position. Since such small naval craft are usually not armored, depending upon light construction together with great speed and maneuverability for safety rather than upon armored protection, the rapidity with which the course is changed may mean the difference between destruction and safety.

The principal object of my invention is to provide a steering wheel for small motor craft, preferably for military use, in which the steering wheel may be easily and quickly rotated in either direction to extreme position.

Another object is to provide a steering wheel having hand grips of the usual construction in which the boat will be steered in the conventional manner, one of the hand grips being adjustable so that it may be rotated to a horizontal position at right angles to the other hand grips, and in such fixed position the steering wheel rotated much in the manner of a coffee grinder.

Still another object is to provide a steering wheel of the conventional type in which one of the hand grips may be rotated from its fixed position in a vertical plane to a fixed position in a horizontal plane, in which position the wheel may be rotated by means of said hand grip rapidly in one direction or the other when necessary, and the hand grips in the usual position extending in a vertical plane utilized for the normal steering of the boat.

Other objects will be disclosed in the specification and claims forming a part of this application.

In the drawing:

Figure 1 is a fragmentary views in elevation illustrating a portion of the steering wheel showing two conventional and one adjustable grip looking from the helmsman's side;

Figure 2 is a detail in elevation showing the opposite side of the adjustable grip, as shown in Figure 1;

Figure 3 is a fragmentary top plan, partly in section;

Figure 4 is a detailed, vertical section taken on the line 4—4 of Figure 2; and

Figure 5 is a top plan, partly broken away, similar to Figure 3, showing the grip rotated to a horizontal position.

Referring to the drawing, in which similar parts are designated by like numerals:

Numeral 6 designates a boat steering wheel having a hub 7, spokes 8, felly 9, hand grips 10, and a rotatable hand grip 11 capable of movement from the vertical to the horizontal as shown in Figure 4.

My invention is primarily concerned with the rotatable hand grip 11 and the means for accomplishing the rotative movement. Under normal conditions the stationary, vertical, hand grips 10 are sufficient to impart direction to the rudder, but in the case of fast motor torpedo boats, surf landing boats, and other naval combat craft, when subjected to machine gun fire and dive bombing attacks, it is essential that the steering wheel be rotated from one extreme to the other in the minimum time. The rotation of the conventional steering wheel by the stationary spokes 10 is slow and cumbersome, as contrasted with my improved hand grip which may be moved to a horizontal position and locked by a thumb screw 12, whereupon the helmsman with one hand can grasp the hand grip and rapidly revolve the steering wheel.

In constructing my improved steering wheel, I place in the felly 9 an H-shaped metal block 13, the arms 14 of the H 13 adapted to receive the felly 9 and be secured by screws 15. The interior of the block 13 has a bottom 16, a back 17 and sides 18, leaving the front 19 toward the helmsman and the top 20 open. The hand grip 11 is mounted on a pintle 21, the lower portion 22 of the grip 11 being rounded so that if the curvature was continued it would form a circle with the pintle 21 in the center and bottom of the hand grip 11 forming a segment of the circle. The sides 23 of the rotatable hand grip 11 are flat above the curved lower end and are adapted to align with the back 17 when the hand grip 11 is in the vertical position and with the bottom 16 when in a horizontal position, as shown in Figure 4. In the same horizontal plane with the pintle 21 is formed an indent 24 adapted to receive the thumb screw 12 and at right angles to the indent 24 is formed a second indent 25 in the same vertical plane with the pintle 21, adapted to receive the thumb screw 12 when the rotatable hand grip 11 is in the horizontal position.

As actually used, under normal conditions the hand grip 11 will be secured in vertical position as shown in Figure 1 by the thumb screw 12 en-

gaging the indent 24. The steering wheel 6 would then be operated in the usual manner by way of the grips or spokes 10 and 11. Upon entering a danger zone, or upon seeing enemy craft, the thumb screw 12 would be withdrawn from the indent 24, the hand grip 11 rotated on the pintle 21 to a horizontal position, or until the upper portion of the hand grip 11 was supported by the bottom 16. Thumb screw 12 would then be turned into the indent 25 securing the hand grip 11 in fixed horizontal position. Upon desiring to return to normal practice, the thumb screw 12 will be retracted from the indent 25, the hand grip 11 moved to the vertical position where the side of the hand grip will align with the back 17, whereupon the thumb screw 12 will secure the hand grip 11 in vertical position.

Numerous variations may doubtless be devised by persons skilled in the art without departing from the principles of my invention. I, therefore, desire no limitations to be imposed on my invention, except such as are indicated in the appended claims.

What I claim is:

1. A steering wheel for small water craft having hand grips extending therefrom, one of said hand grips pivotally mounted in the periphery of said wheel and having a rounded inner end and flat sides extending therefrom, an indent at the lower point of curvature and another indent opposite the rotating supporting means, each indent at substantially right angles to each other, a set screw means engaging the indent opposite the pivotal means for positively locking said hand grip in the plane of rotation of the wheel and for locking engagement with the other indent upon the rotation of the hand grip to a plane at substantially right angle to the plane of rotation of said wheel, whereby the said hand grip may be fixedly held in either vertical or horizontal positions so that said wheel may be rapidly revolved from one limit to another.

2. A steering wheel for small water craft having hand grips extending therefrom, an H-shaped box having legs, sides, back and bottom mounted in the outer periphery of said wheel, the legs of the H secured in the wheel, the top and one side toward the helmsman being open, the bottom and back at right angles to each other, means for pivotally mounting one of said hand grips in said box, said hand grip having a rounded end below said means, an indent in the same horizontal plane to said means and adjacent said back of the box, another indent in the same vertical plane to said means in said rounded portion of the rotatable grip, retractable means extending through the back of the box adapted to engage the indent in the same horizontal plane with the pivotal means, for securing said rotatable hand grip in a substantially vertical plane with the plane of rotation of the wheel, and upon rotation of the rotatable hand grip to a position substantially at right angles to the plane of rotation of said wheel and adapted to engage the indent in the rounded surface of the hand grip and lock said rotatable hand grip in said position so that said wheel may be rapidly revolved from one limit to the other, the back and bottom of the box serving to align the indents with the retractable securing means.

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