Jan. 1, 1935. C. RING 1,986,750

HYDROCYCLE

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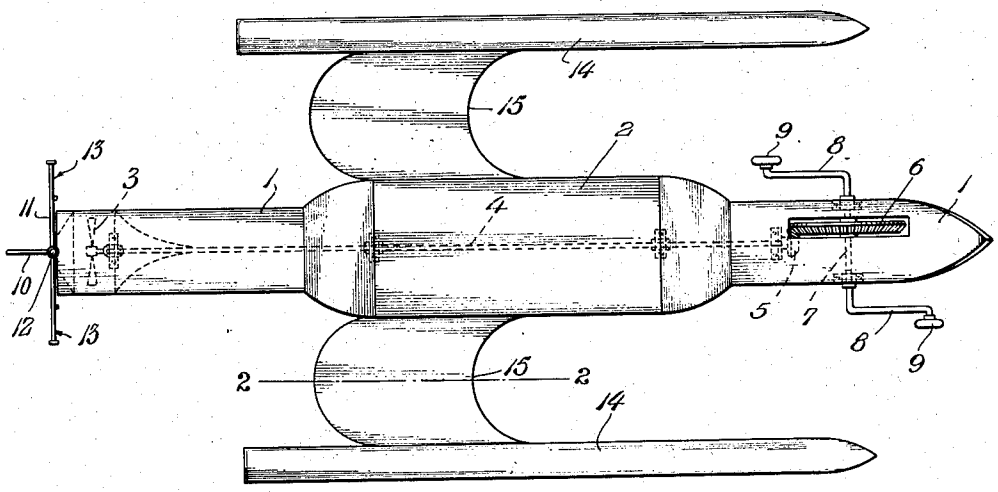


Fig. 1.

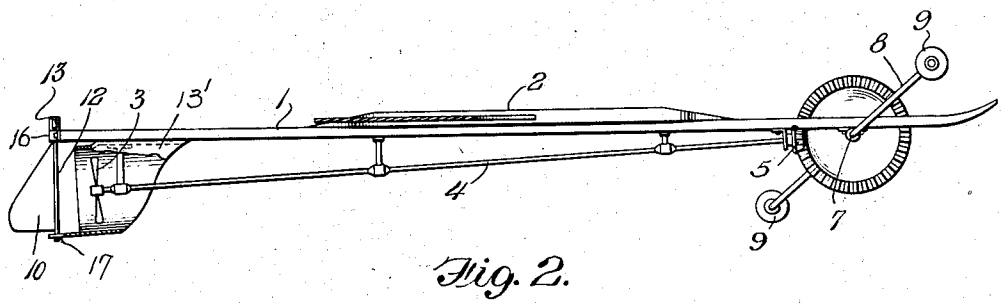


Fig. 2.

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HYDROCYCLE

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1 Claim. (Cl. 9—18)

The invention has relation to hydrocycles, having for an object to provide an improved machine of this description wherein the person driving lies prone in a swimming position upon a support and exercises the muscles of the arms, shoulders, neck and back as in swimming, and propels the machine at a much greater speed than would be possible in swimming. Another object is to provide a rudder control adapted for operation by the feet and legs of the driver, whereby his vigorous efforts in propelling the machine as stated will not be disturbed in the steering of the machine. Other objects and advantages will hereinafter appear.

The invention consists in the novel construction and combinations of parts as set forth in the appended claim.

In the accompanying drawing illustrating the invention, Figure 1 is a plan view of the machine, with parts in dotted lines, and Figure 2 is a section on the line 2—2, Figure 1.

In this drawing, the numeral 1 designates a main frame or support consisting of a flat horizontal board or the like, somewhat extended at the central portion thereof at 2 to provide more support for the body of a person lying prone upon the support in a swimming position with the head inclined to one side as customary.

A screw propeller 3 is located in rear of the support and has a longitudinal shaft 4, located below the support and provided at the forward end thereof with a small bevel gear or pinion 5, meshing with a large bevel gear 6 on a main drive shaft 7, the latter being located transversely of and on approximately the same level as that of said support, said shaft being provided with cranks 8 at its ends, and said cranks having handles 9.

In driving the machine, on the rear stroke the crank arms 8 and the arms of the driver will pass through the water as in swimming to aid the drive, while on the forward stroke said crank arms and the arms of the driver will pass through the air to lessen resistance. Due to the fact that the main drive shaft 7 is on the same level as that of the support 1 or approximately so, and the screw propeller is located below the support necessarily, the propeller shaft has a slight incline from front to rear and the propeller on said shaft is slightly inclined downwardly, the propeller in this way exerting a slight lifting action upon the support as well as driving it forwardly. A rudder 10, is in line with and in rear of the propeller, and is provided with a horizontal transverse control lever 11, having centrally thereof a fulcrum upon the pintle 12 of the propeller, the opposite arms of said control lever projecting laterally of the support 1 and being provided at the ends thereof with pedals 13, adapted to be engaged by the feet of the driver. This control lever is located on approximately the same level as that of the support 1, within easy reach of the driver's feet and any possibility of interference with the driver's feet of said propeller is prevented by the support 1, which overlies and guards the propeller.

A further guard against interference of the propeller with the driver's feet is provided by the tubular casing 13′ within which the propeller works, and which is secured to and carried by the support 1.

Lateral floats or pontoons 14 are provided, one at each side of and spaced from the support 1, said floats being at the rear end portions only thereof connected to said support by means 15, the forward edges of which are concave to provide clearance for the arms of the operator working the cranks 8, such as shown at 15.

The post 12 of the rudder has upper bearings 16 at the rear of the support 1, and lower bearings 17 in a rear lower extension of the tubular casing 13′, the latter having a diameter substantially equal to the length of said rudder post.

The handles 9 of the cranks of the drive shaft 7, are adapted to be located one within the grasp of the hand of one outstretched arm of the driver and the other within the grasp of the hand of the other contracted arm of the driver lying prone on the support 1 in swimming position, whereby a natural and powerful arm and shoulder action is provided for in driving, much as in swimming, and serving for the development of the swimming muscles of the arms, shoulders, neck and back.

The pedals 13 of the control lever 11 of the rudder are both located within easy reach of the feet of the slightly contracted legs of the driver.

The machine is adapted to support six or more persons and besides affording healthful exercise for the driver and amusement for the driver and the spectators, is adapted to be of considerable aid in saving life in case of peril at seaside or river resorts. The invention is also adapted to be of use for scouting purposes in time of war, due to silence of operation and the speed at which it may be readily propelled.

I claim:—

In a hydrocycle, a straight flat horizontal support, a propeller located at the rear end of said

support, a tubular casing inclosing said propeller, hand operable means for driving said propeller including a rotary shaft having hand cranks located at the forward end of said support, a rudder, lateral floats one at each side of and spaced from said support, and connecting means between said floats and said support; said rudder having a vertical post provided with upper bearings in said support, said propeller being located beneath said support adjacent to and forward of said rudder and having a diameter substantially equal to the length of said rudder post, said tubular casing having a lower rear extension engaging and providing lower bearings for said rudder post, and said connecting means connecting the rear end portions only of said floats with said support and having concave forward edges to provide clearance for the arms of the operator.

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