

April 6, 1926.

1,579,529

J. E. HASCHKE

DIRIGIBLE BUOY

Filed April 15, 1925

Fig. 1.

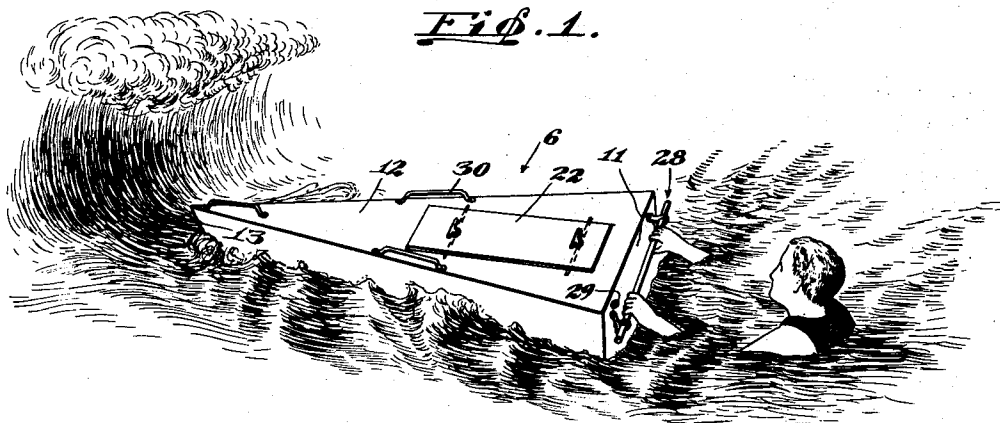


Fig. 2.

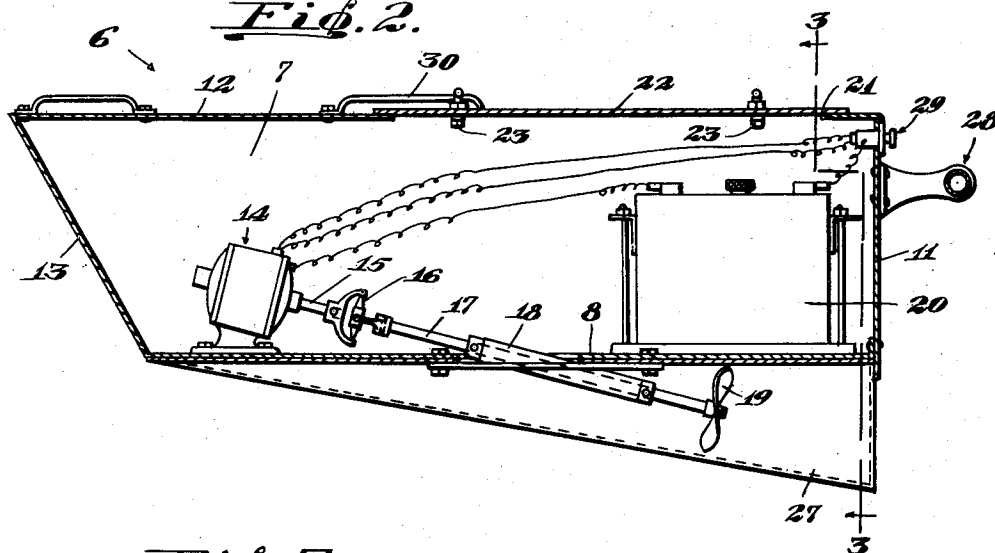
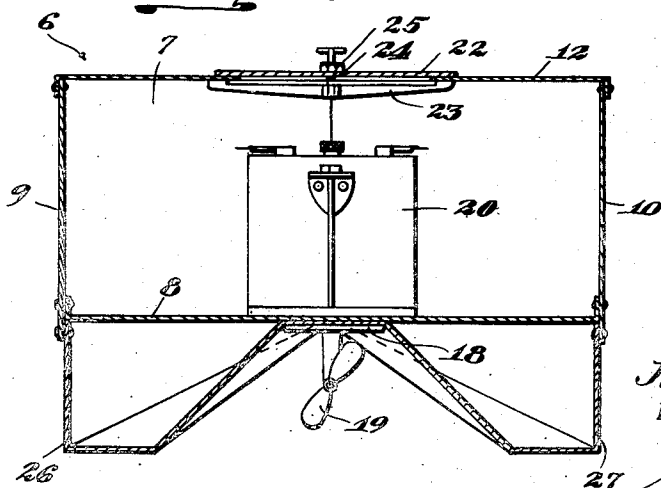


Fig. 3.



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UNITED STATES PATENT OFFICE.

JULES E. HASCHKE, OF REDONDO BEACH, CALIFORNIA.

DIRIGIBLE BUOY.

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To all whom it may concern:

Be it known that I, JULES E. HASCHKE, a citizen of the United States, residing at Redondo Beach, in the county of Los Angeles and State of California, have invented new and useful Improvements in Dirigible Buoys, of which the following is a specification.

This invention particularly pertains to a buoy which is adapted to be motor propelled and manually controlled and has as its primary object the provision of a dirigible buoy which is especially adapted for use in aquatic sports and as a life saving device, and which is so constructed and arranged that it may be operated to tow a person through the water and be readily navigated by the person being towed.

Another object is to provide a buoyant structure which is normally non-sinkable, and which embodies a power driven propeller whereby it may be impelled through the water and which is so formed that it may be readily steered by a person in the water.

The mode of carrying out the foregoing objects, as well as such objects, features and advantages of the invention as may subsequently appear, is hereinafter described, and is illustrated by way of example in the accompanying drawings in which the several views depict constructions and arrangement of elements and parts whereby the invention may be carried into effect.

Referring to the drawings, the several views are as follows:—

Figure 1 is a perspective view illustrating the buoy in operation;

Figure 2 is a view of the buoy as seen in longitudinal section;

Figure 3 is a view in vertical section as seen on the line 3—3 of Figure 2.

More specifically, 6 indicates generally a buoy structure which includes an hermetically sealed chamber 7, enclosed by a bottom wall 8, side walls 9 and 10, an end wall 11 and a top wall 12; the structure being here shown as substantially triangular in shape in plan with the side walls 9 and 10 converging toward each other from the end wall 11 and meeting to form a prow 13.

The surface of the walls of the structure may obviously be formed of any configuration, it being desirable, however, that it be generally tapered in plan from a blunt stern to a pointed prow in such manner as to minimize resistance to its progress through

the water and afford penetration of the structure as it advances in a body of water and whereby steering of the structure may be facilitated as hereinafter described.

Arranged within the chamber 7 is a motor 14 the shaft 15 of which connects through a universal joint 16 with a downwardly and rearwardly inclined propeller shaft 17 passing through a bearing 18 in the bottom wall 8 and which shaft is fitted with a propeller blade 19.

The axis 17 of the propeller blade 19 lies on a vertical plane medially of the structure from the prow to the stern with the propeller facing sternward and disposed at a slight angle to the vertical so that in operation the propeller will act to drive the structure forward, prow foremost, and tend to impel the prow in an upwardly inclined direction.

Any suitable means of motive power may be employed but in practice I prefer to use an electric motor constructed in accordance with my invention set forth in United States Letters Patent No. 1,186,658, issued to me on the 13th day of June, 1916.

Demountably arranged in the chamber 7 is an electric battery 20 which may be of the type ordinarily employed on motor vehicles; I having found in practice that an ordinary six volt battery employed in connection with a motor of the type above referred to will serve to propel the device for about two hours. It is obvious, however, that any suitable source of electrical power may be employed without departing from the spirit of the invention.

As a means for affording access to the chamber 7 the top wall 12 is formed with an opening 21 preferably arranged directly over the battery 20 through which the battery may be removed and replaced and which opening is closed by a cover panel 22 held in place by a pair of clamp bars 23 pivoted at 24 to the cover panel and adapted to be engaged with the underside of the top panel 12 along the margin of the opening 21; the pivots 24 of the bars 23 constituting threaded stems on which are screwed clamping nuts 25 by which the cover 22 may be tightly clamped on the wall 12 in a position over the opening 21 to close the latter in the manner common to manhole cover constructions.

Projecting downwardly from the bottom wall 8 on opposite sides of the propeller 19 are hollow keels 26 and 27 which serve, when

the structure is in the water as stabilizers and also increase the buoyancy of the structure, and when the structure is out of the water act to guard the propeller 19 and also serve as runners.

Mounted on the stern wall 11 and extending horizontally transversely thereof is a handle bar 28 arranged to be readily grasped by a person to be towed, and arranged adjacent the handle 28, convenient to the reach of a person gripping the handle bar, is a switch 29 for controlling the circuit between the battery and the motor, whereby the operator may throw the motor in and out of operation, as desired.

Suitable hand holds 30 may be provided on the structure at convenient points to which one or more persons may cling when the device is in operation, and also serve as hand holds by which the device may be readily lifted and carried as in transporting over the ground.

In operation, the structure when placed in a body of water, will float therein by reason of its buoyancy and will be normally maintained in its upright position by reason of the load of the motor and battery being carried below its center of gravity. The operator grasps the handle bar 28 and manipulates the switch 29 to direct electrical current to the motor 18 so as to set the propeller in motion, whereupon the propeller will act to drive the structure, prow foremost, through the water. The operator clinging to the handle bar 28 will then be towed through the water and may direct the structure in any desired course merely by swinging the structure by a push or pull imposed on the handle bar 28 and may control its propulsion by means of the switch 29. The structure being of general triangular shape, and light in weight, it may be readily swung from side to side, or rocked laterally or longitudinally so that it may be easily and quickly steered by a person being towed, which coupled with the buoyancy and non-sinkable character of the structure, permits its being operated in extremely rough waters.

The structure is capable of being caused to dive by directing the prow downward

which is accomplished by the operator pushing upward on the stern, thus rendering the structure especially suitable for use in towing a person through breakers, as the operator may direct the prow into an approaching breaker and cause such submergence of the structure as it meets the breaker that it will dive therethrough and rise to the surface to the rear thereof, and thus set to tow the person clinging to the structure into and through the breaker.

I claim:—

1. A dirigible buoy comprising a buoyant structure, a power driven propeller for impelling said structure through water, and means whereby said structure may be steered and controlled by a person being towed thereby.

2. A dirigible buoy comprising a buoyant structure, a power driven propeller for impelling said structure through water, a handle bar on said structure adapted to be grasped by an operator, whereby the operator may be towed through the water and whereby the operator may steer the structure while being towed, and means within reach of the operator for controlling the propeller while clinging to the handle-bar.

3. In a dirigible buoy, the combination of a buoyant structure, a motor thereon, a propeller operable by said motor, and means whereby said structure may be steered and controlled by a person being towed thereby.

4. In a dirigible buoy, a buoyant structure embodying a hermetically sealed chamber, an electric motor, a storage battery, said motor and battery being enclosed in said hermetically sealed chamber, conductors forming an electrical circuit for driving said motor from said battery, a propeller actuated by said motor, a handle bar on said structure arranged to be grasped by an operator from a position in the water whereby the operator may be towed through the water, and by means of which the operator may steer the structure while being so towed, and means for controlling the operation of the motor arranged within the reach of the operator clinging to the handle bar.

JULES E. HASCHKE.