March 6, 1928. 1,661,499

E. PROTEAU

AQUATIC DEVICE

Filed July 19, 1926

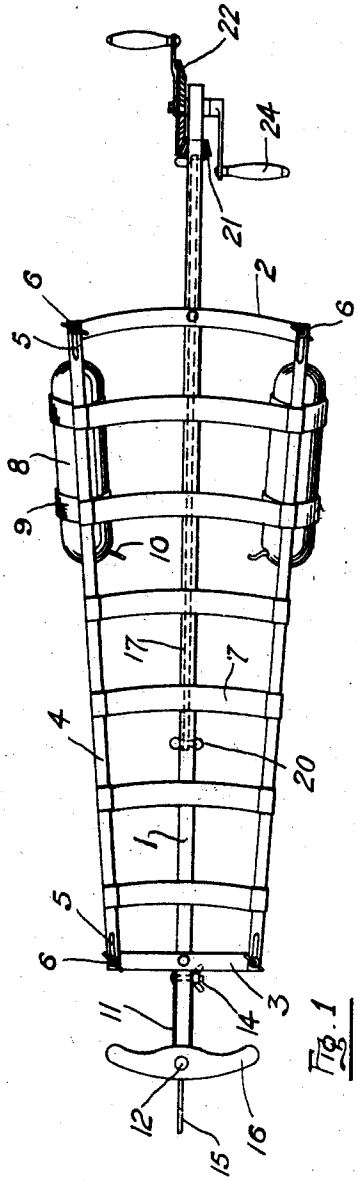


Fig. 1

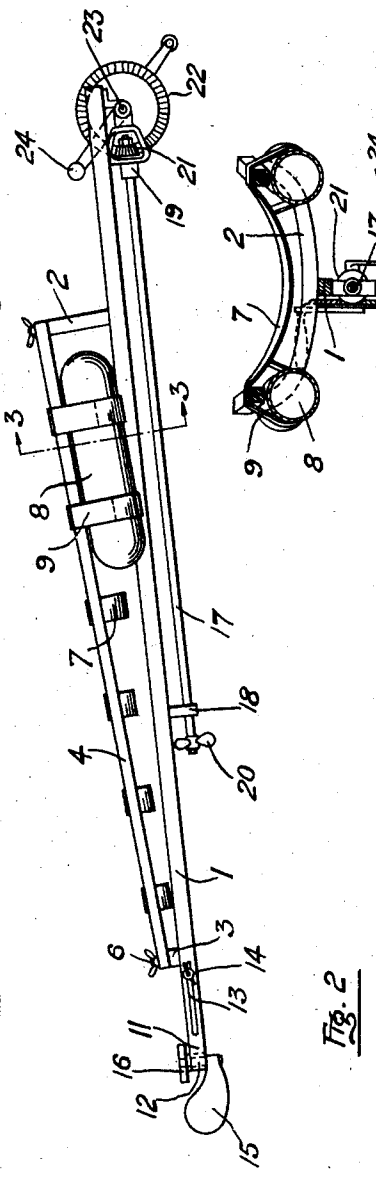


Fig. 2

Fig. 3

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UNITED STATES PATENT OFFICE.

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AQUATIC DEVICE.

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My invention relates to improvements in aquatic devices, the objects of which are particularly adapted for instructive or amusement purposes. The objects of the invention are to provide a semi-submersible structure upon which a person may be supported in a swimming position and upon which he may propel and steer himself through the water.

Further objects are to provide means whereby the device may be shortened or extended to suit persons of different stature, and for varying the buoyancy of the device to accommodate the varying weight of the users, and to provide means for collapsing the device for convenience in packing and carrying.

The invention consists essentially of a frame surmounting a keel from which a propelling mechanism and a rudder is mounted and a pair of expansible floats for the frame, as will be more fully described in the following specification, in which:—

Fig. 1 is a plan view of the invention.

Fig. 2 is a side view of the invention.

Fig. 3 is a transverse sectional view taken on the line 3—3 of Figure 2.

In the drawings like characters of reference indicate corresponding parts in each figure.

The numeral 1 indicates a keel or centre member, having adjacent its opposite ends, pivotally connected to it, a forward and a rear transverse member, indicated by the numerals 2 and 3 respectively. The forward member 2 is upwardly curved at its outer ends so as to lie well below the breast of the user and to permit of freedom of arm movement.

Extending from the ends of the member 2 to the corresponding ends of the member 3 is a pair of side rods 4 which are slotted at their extremities as at 5 and are connected to the members 2 and 3 by thumb bolts 6 extending through said slots. Extending between the side rods 4 are straps or lengths of webbing 7 which are of such length as to provide conjointly a support conforming to the shape of the body so that each strap will support a proportionate weight and that the user's body will be comfortably disposed when lying outstretched thereupon.

Adjacent the forward end of the side rods a pair of inflatable floats 8 are connected which are held in place under the rods by straps 9. The floats are preferably of rubber or other distensible material so that they may be inflated to any desired size to provide the necessary buoyancy for any user and to maintain the device at a suitable angle when in use to provide for its convenient operation.

The floats are provided with suitable valves 10 to permit of inflation or deflation as required.

The numeral 11 indicates a strip of metal bent back upon itself to form a bearing for a rudder post 12, the ends of the strip being slotted as at 13 to permit of its being adjustably secured by a pair of bolts and thumb nuts 14 to the rear extremity of the keel 1.

At the lower end of the rudder post 12 is a rudder 15 and at its upper end is a yoke 16 which is adapted to lie in a convenient position for operation by the user's feet.

The numeral 17 indicates a propeller shaft suitably journalled below the keel 1 as at 18 and 19 at the rear end of which a propeller 20 is fitted.

The forward end of the propeller shaft is fitted with bevel pinion 21 which is driven by a suitably journalled bevel gear 22 on a shaft 23, which shaft is fitted with a pair of hand cranks 24.

Having thus described the several parts of my invention I will now briefly explain its use.

The rudder position is adjusted as to length by sliding the strip 13 lengthwise along the keel 1 and securing it when adjusted by tightening the nuts 14.

The device is then set in the water, wherein it assumes an acutely inclined position. The user then lies face down upon the straps 7, grips the hand cranks 24 and places his feet upon the yoke 16.

As he turns the cranks, the propeller is rotated to drive the device and himself forward. By pressing on one side of the yoke 16 the device is steered in the direction opposite to the side pressed upon.

If the angle assumed by the device when in use is too steep, the floats 8 should be deflated until the angle is corrected and the device allowed to assume a position wherein resistance to propulsion is reduced to a minimum.

After withdrawing the device from the water the floats 8 may be entirely deflated, and by loosening the bolts 6 the transverse members 2 and 3 turned about their pivot pins, thus disposing the side rods 4 parallel

to and in close proximity to the keel 1, so that the device can be reduced to compact form for carrying or storage.

What I claim as my invention is:

1. An aquatic device of the character described comprising a central keel member, a body supporting frame including transversely extending end members intermediately pivoted to the keel member and projecting laterally beyond the sides of said member, side members extending between corresponding extremities of said end members, fastening means connecting said side and end members together in such manner as to enable said members to be rigidly secured in rectangular formation or to be adjusted by turning movement of the end members to dispose all of said members above and in substantial parallelism with the keel member and flexible body, supporting means carried by the side members adapted to support a body thereon in the operative position of the side members.

2. An aquatic device of the character described comprising a keel member, a propeller shaft journalled in bearings carried by the underside of said keel member, handle means carried by the forward portion of said keel member, a drive connection between said handle means and the propeller shaft, a rudder carried by the rear end of the keel member and including a foot operable control member, a body support carried by said keel member and including transversely extending end members intermediately secured to the upper surface of the keel member and projecting laterally beyond opposite sides of said keel member, the forward end member being curved to dispose the extremities thereof in a plane above that containing the extremities of the rear end member, side members connecting corresponding extremities of said end members and thereby supported to incline upwardly toward the forward end of the keel member, flexible body supporting straps extending between and connecting said side members, and buoyant means carried by said body supporting frame.

3. An aquatic device of the character described including a central keel member and a body supporting frame having transverse end members intermediately pivoted to the keel member and projecting laterally beyond either side of said member and side members connecting the corresponding terminal portions of the end members and secured thereto by a slot and pin connection, one of the end members of the frame being bowed upwardly at its extremities to dispose the side members at an inclination and said frame being provided centrally with means forming a body supporting surface.

Dated at Kamloops this 2nd day of July, 1926.

ELIZABETH PROTEAU.