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V. V. BACON

SWIMMING APPLIANCE

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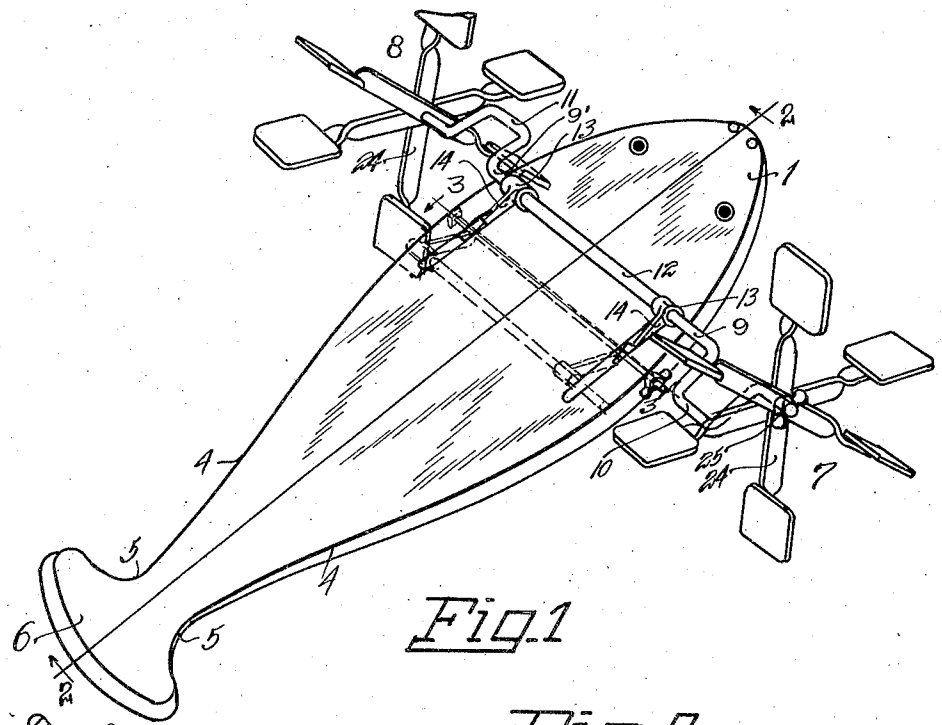


Fig. 1

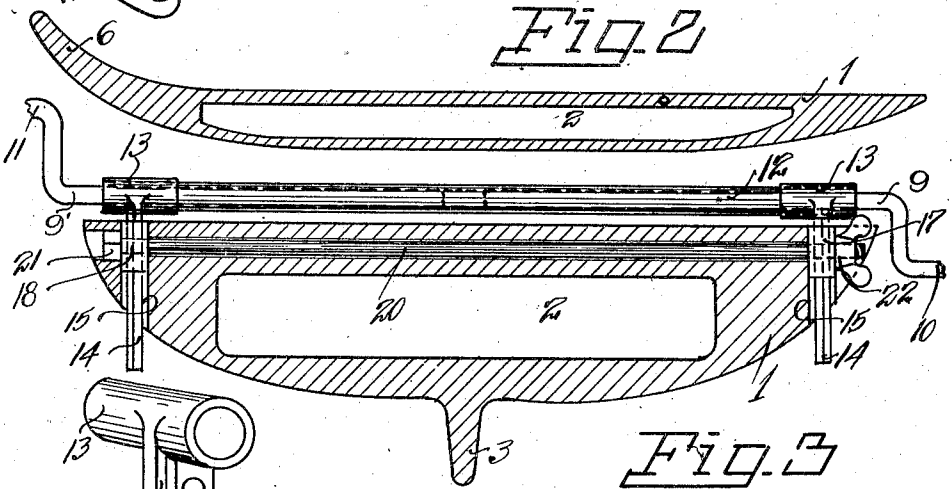


Fig. 2



Fig. 3

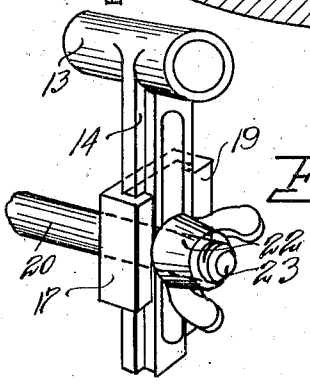


Fig. 4

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# UNITED STATES PATENT OFFICE.

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## SWIMMING APPLIANCE.

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My present invention relates to an improved swimming appliance adapted especially for aquatic sport and for beginners who are learning to swim. The appliance comprises a buoyant body upon which the operator may be supported in position to manually operate paddle wheels for the mechanical propulsion of the appliance, and means are provided in the propulsion mechanism whereby the appliance may be steered or guided by selective use of the paddle wheels. Means are also provided for adjusting the appliance to the size of the operator, and the operator is supported on the buoyant body in usual swimming position with the hands free to operate the propelling mechanisms.

The invention consists in certain novel combinations and arrangements of parts involving the body of the appliance and the propulsion mechanism as will hereinafter be more fully pointed out and claimed.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention wherein the parts are combined and arranged according to the best mode I have thus far devised for the practical application of the principles of my invention.

Figure 1 is a perspective view of an appliance embodying my invention wherein the hollow, buoyant body, having the shape of a fish is equipped with the manually operated propulsion mechanism.

Figure 2 is a longitudinal sectional view through the buoyant, hollow, air-tight and water-tight body of the appliance.

Figure 3 is a transverse sectional view at line 3—3 of Figure 1.

Figure 4 is a detail perspective view of one of the bearing-supports for the propulsion mechanism, showing the adjusting means therefor.

In the preferred form of my invention I utilize a body 1 fashioned from suitable light material and preferably in the form of a fish, having an interior air, and water tight compartment 2 extending substantially throughout its length, and a keel portion 3 at its underside. Toward the rear of the body its sides converge as indicated at 4, 4, and the narrowest portion, between side edges 5, 5, is straddled by the operator who sits upon the fan-shaped, up-turned tail portion 6, facing of course toward the forward end of the body. In use, the operator assumes the position of a swimmer, straddling the rear end of the body of the device and lying prone upon the body 1 which is thus made to take an angular position with relation to the water level and submerged sufficiently below the level of the water in order that the paddle wheels 7 and 8 may be effective in propelling the appliance. The wheels are located at opposite sides of the forward end of the body and are rotated or revolved so that their lower blades will pass through the water for propelling the appliance. Each paddle wheel has a crank-shaft section as 9 and 9′ and these respective sections are fashioned with cranks 10 and 11 to be grasped by the right and left hands respectively.

The two sections 9 and 9′ of the crank shaft thus form a sectional shaft disposed transversely of the appliance and they are supported to revolve in a long bearing sleeve 12, it being understood that the paddle wheels are thus independently revolvable by the use of the cranks. Thus the right paddle wheel may be turned to propel the appliance and the left wheel remain idle for steering purposes, or the operator may "back-water" with one paddle wheel and forwardly rotate the other wheel, if desired.

The long bearing sleeve is disposed across the upper face of the body of the appliance and is supported at its ends in bearing collars 13, 13, each of which is integral with or fixed to a bracket arm 14 that extends through a slot 15 in the body of the appliance and located near one of its sides. The bracket arms extend through the slots at a slight angle to the flat upper face of the body of the appliance and they are supported in such manner that the arms and the crank shaft with its paddle wheels, may be adjusted toward or away from the seat or saddle portion 6 at the tail of the body. For a small person, the crank shaft and arms are drawn or turned to the dotted line position of Figure 1, and for a larger person the crank shaft and paddles are disposed as shown in full lines.

An additional adjustment of the crank arms is secured by the use of slots 16 that extend longitudinally of the bracket arms as will be described. The slotted bracket arms are slidable for adjustment in supporting blocks 17 and 18, each of which has a pair of opposed retaining and guide flanges 19 for the arms. The blocks are perforated for

the accommodation of a bolt 20 that is passed through the blocks and extends transversely through a bolt hole in the body of the appliance. At one end the bolt is fashioned with a head 21 engaging the outer side of the block 19, and a nut 22 is threaded upon the opposite end 23 of the bolt and adapted to frictionally engage the outer face of the flanged block 17. Thus the blocks in the slots 15 of the body 1 may be retained in fixed position by clamping the nut 22 on the bolt end, but when the nut is loosened the slotted bracket arms may be slid in their retaining blocks to adjust the crank shaft toward or away from the retaining bolt 20. By this adjustment the cranks of the crank shaft may be moved beyond the full line position of Figure 1 to adapt the appliance for a person with a longer stretch of the arms, or the cranks of the crank shaft may be moved nearer than the dotted position to the tail of the appliance for a person with a shorter reach.

In this manner the crank shaft and paddle wheels may be swung on the retaining bolt as a pivot for adjustment with relation to the body of the appliance, or the crank shaft may be adjusted as to distance with relation to the retaining bolt 20 through the slotted connection of the bracket arms with the bolt and blocks, thus adapting the appliance for use by persons of various sizes and ages.

It will be noted that the twisted shanks 24 of the paddle wheels each has a pair of blades at its ends and the shanks which are centrally perforated are retained on the outer ends of the respective crank-shaft sections by thumb nuts 25. When not in use the three shanks may be swung on the shaft ends into alinement and the nuts tightened to provide a compact formation for the wheels in order to reduce required space for storing the appliance. It will also be apparent that the propelling mechanism may be detached with facility from the body of the appliance when necessary by removal of the thumb nut 22 and bolt 20 to release the retaining blocks and bracket arms of the propelling mechanism.

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

1. The combination with a buoyant body having a narrow tail portion and an enlarged upturned seat portion forming an extension thereof, of a pair of paddle wheels, and manually operated, mechanical propulsion mechanism adjustably supported on said body for said wheels.

2. In a swimming appliance the combination with a buoyant body having a converging rear end and an upturned and enlarged extension forming a seat or saddle, and manually operated, mechanical propulsion mechanism supported on said body, for the purpose described.

3. The combination with a buoyant support having a bearing sleeve supported in adjustable relation and transversely thereof, of a sectional crank shaft journaled in said bearing sleeve, and paddle wheels mounted on the opposite ends of said crank shaft.

4. The combination with a buoyant support having spaced, adjustable bracket arms, of a transversely disposed bearing sleeve supported on said arms, a sectional crank shaft journaled in the sleeve, and paddle wheels mounted at the opposite ends of said shaft.

5. The combination with a buoyant body having slots therein and slotted bracket arms on said slots, of retaining blocks for said arms and a retaining bolt passed through said arms and blocks, collars on said arms and a bearing sleeve supported in said collars, a sectional crank shaft journaled in the sleeve, and paddle wheels on the outer ends of said shaft.

In testimony whereof I affix my signature.

VICTOR V. BACON.