Feb. 7, 1928.

1,658,730

M. MacRAE

SWIMMER'S PADDLE

Filed Dec. 29. 1926

Fig. 1.

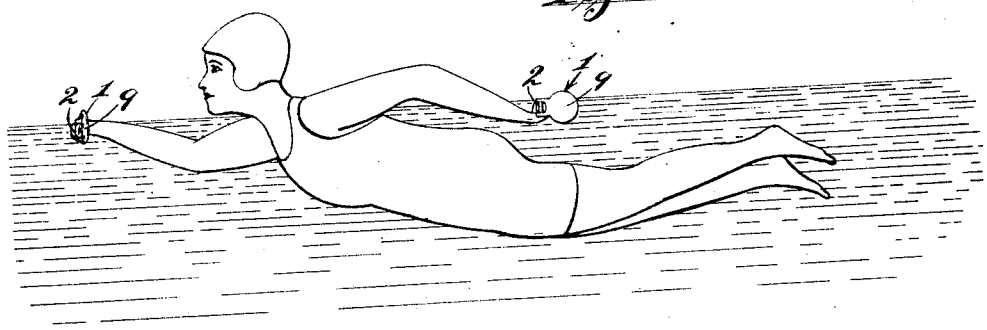


Fig. 2.

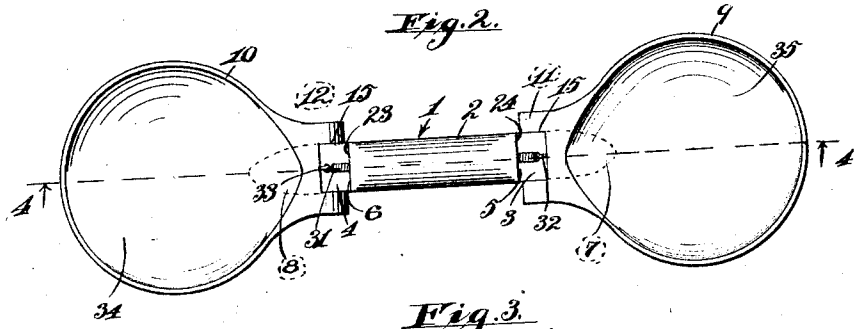


Fig. 3.

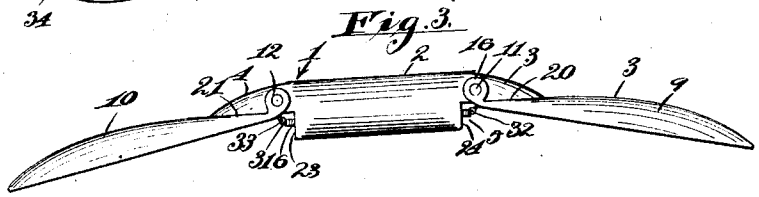
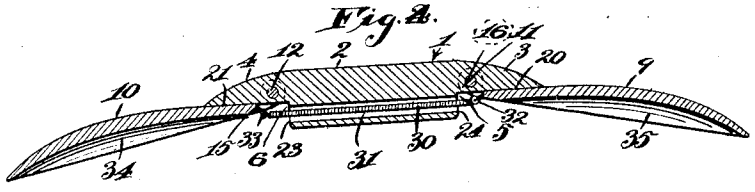


Fig. 4.



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UNITED STATES PATENT OFFICE.

MALCOLM MacRAE, OF LONG BEACH, CALIFORNIA.

SWIMMER'S PADDLE.

Application filed December 29, 1926. Serial No. 157,688.

This invention relates to swimmers' paddles, and has for an object to provide a device which will enable a swimmer in the water to propel himself through the water with comparatively great rapidity.

A further object of my invention is to provide a device which has a handle that the swimmer may grasp, and a pair of pivoted paddles thereon which are collapsible and which afford comparatively great resistance to the water as the swimmer is making his advanced stroke, but which will offer little resistance to the water as the swimmer is making his return stroke.

A still further object of my invention is to provide a device which is extremely simple in its construction, efficient in its operation which can be manufactured at a very nominal cost and which is well adapted to perform the services required of it.

With the foregoing and other objects in view which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a view showing a pair of my novel swimmer paddles in actual use by a person represented as swimming in a body of water. One paddle shown in this figure is extended for resistance to the water as the swimmer makes his advanced strokes. The other paddle is shown collapsed as the swimmer is making his return stroke.

Figure 2 is a plan view of one of the paddles embodying the principles of my invention showing the same in an extended position.

Figure 3 is a side view of the disclosure illustrated in Figure 2, and Figure 4 is a side sectional view taken along the lines 4—4 of Figure 2.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, my novel swimmer paddle is represented as an entirety at 1, and comprises a gripping member 2. This gripping member is substantially cylindrical in shape and is preferably provided with slight curves whereby the same may comfortably conform to the shape of the swimmer's hand. This handle may be formed of wood, cork, metal, hard rubber or the like, but when it is constructed of metal, it is preferable to use metals of comparatively light weight such as aluminum or the like. The handle may be either solid or hollow as desired, and in the drawings I have shown a solid handle which is provided at its end with a pair of flanges 3 and 4. These flanges are formed by virtue of cut-out portions 5 and 6. On the handle 2, the forward contour of the flanges conforms, or is continuous with, the forward contour of handle 2, but slopes slightly rearwardly so as to alleviate any frictional resistance to the water. The flanges 3 and 4 are preferably rounded as shown in the dotted lines 7 and 8 of Figure 2. The purpose of these flanges will be set forth hereinafter. A pair of paddle members shown at 9 and 10 having concave-convex surface 34 and 35 respectively, are pivoted to the handle member as at 11 and 12, by means of a suitable pin or the like. These members may be pivoted at any desirable point on the handle member but as clearly shown in Figures 3 and 4, I prefer to pivot them to the flanges 3 and 4 at a point adjacent the cut-out portion. These paddles are provided with suitable cut-out portions 15, and the lugs consequently formed by virtue of the cut-out portions extending preferably at an angle to the plane of the paddle as shown at 16, whereby the same may form elements of the hinge. The apertures extending through these lugs are adapted to be brought into alignment with the pintle pin extending through the flanges 3 and 4. In this manner the paddles 9 and 10 are pivotally associated with the handle #2. The paddles 9 and 10 are substantially cylindrical in form and are preferably concavo-convex as may be seen in Figure 3, and have their convex surface extending forwardly, whereby as little resistance as possible is offered to the water upon the return stroke, and whereby the maximum amount of resistance is offered to the water on the forward stroke. The flanges 3 and 4 are provided on their inner surface with a pair of shoulders 20 and 21 against which the paddles are adapted to abut to limit their forward swinging movement, and the resistance of the paddles to the water is imparted thus to the flanges 3 and 4 and consequently through the handle to the arm of the swimmer. The cut-out portions 5 and 6 in addition to providing the shoulders 20 and 21, provide shoulders

23 and 24, which shoulders serve to prevent complete collapsing of the paddles and in this manner the forearm of the swimmer is guarded from contact with the paddles. In order to prevent undue flapping of the paddles, an elongated aperture is formed longitudinally of the handle as shown at 30 and extending through this aperture is a coil spring 31 which spring is formed of material having a very high degree of resiliency. A pair of hooks 32 and 33 may be secured to the inner edge of the paddles, to which hooks the spring 31 is operatively connected. Thus the paddles 9 and 10 are held in collapsed relationship when the device is not in use, or when in use when the return stroke is being made. The provision of this spring however, is immaterial, but I have preferred to show the same illustrated in the drawings, although I contemplate manufacturing my device without including in the manufacture thereof, any means for holding the paddles in collapsed relation. I do not however, waive any rights to claiming the use of said spring as a distinct advantage and part of my invention. In actual use, a pair of these paddles are provided the swimmer. The handle of each one is grasped by the swimmer and the convex surface of the concavo-convex paddles are positioned so as to extend forwardly. As the swimmer performs his forward or pulling stroke, the paddles fly outwardly and the concave surface of the paddles offers considerable resistance to the water, whereby the swimmer may be propelled forwardly. As the swimmer makes the return stroke with his arm, the action of the water, together with the action of the spring 31, serves to collapse the paddles as shown in Figure 1, whereby little resistance is offered by the paddles to the water. It is obvious then that I have provided an efficient swimmer's paddle which will operate efficiently, which is not likely to get out of order, and which performs the services required of it adequately.

It will be understood that various changes in the detail of construction may be made without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:

1. A swimming paddle comprising in combination a gripping member having a pair of paddles pivoted thereto, said paddles being concavo-convex in form, means for limiting the forward swinging movement of said paddles, means for limiting the rearward swinging movement of said paddles, and means for urging said paddles into collapsed relation, said means comprising a spring extending longitudinally through said handle and attached to said paddles.

2. A swimming paddle comprising in combination a gripping member having a pair of paddles pivoted thereto, means for limiting the forward swinging movement of said paddles, means for limiting the rearward swinging movement of said paddles, and means for urging said paddles into collapsed relation, said means comprising a spring extending longitudinally through said handle and attached to said paddles.

3. A swimming paddle comprising in combination a gripping member, said gripping member having an arcuate forward surface, laterally extending wings, a rearwardly extending shoulder portion, a pair of paddles, each having a bifurcated end pivoted to said wings and straddling the same, whereby the forward and rearward swinging movement of said paddles will be obstructed by said wings and said shoulder.

4. A swimming paddle comprising in combination a gripping member, said gripping member having an arcuate, forward surface, laterally extending wings, a rearwardly extending shoulder portion, a pair of paddles, each having a bifurcated end pivoted to said wings and straddling the same, whereby the forward and rearward swinging movement of said paddles will be obstructed by said wings and said shoulder, and means for urging said paddles into collapsed relation.

In testimony whereof I have signed my name to this specification.

MALCOLM MacRAE.