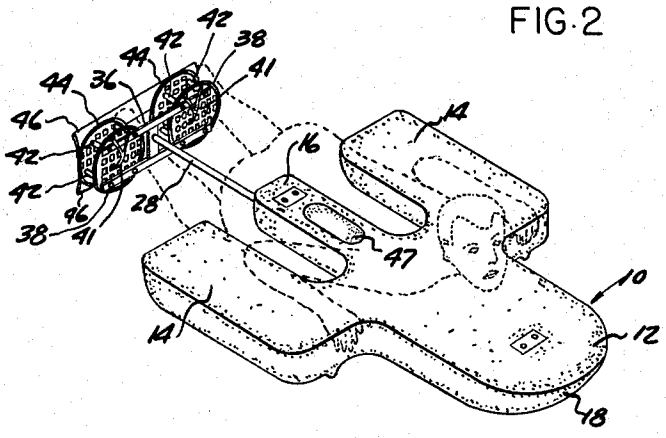
April 20, 1965 D. CAMPBELL 3,179,080

SWIMMER'S FLOAT

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FIG. 2



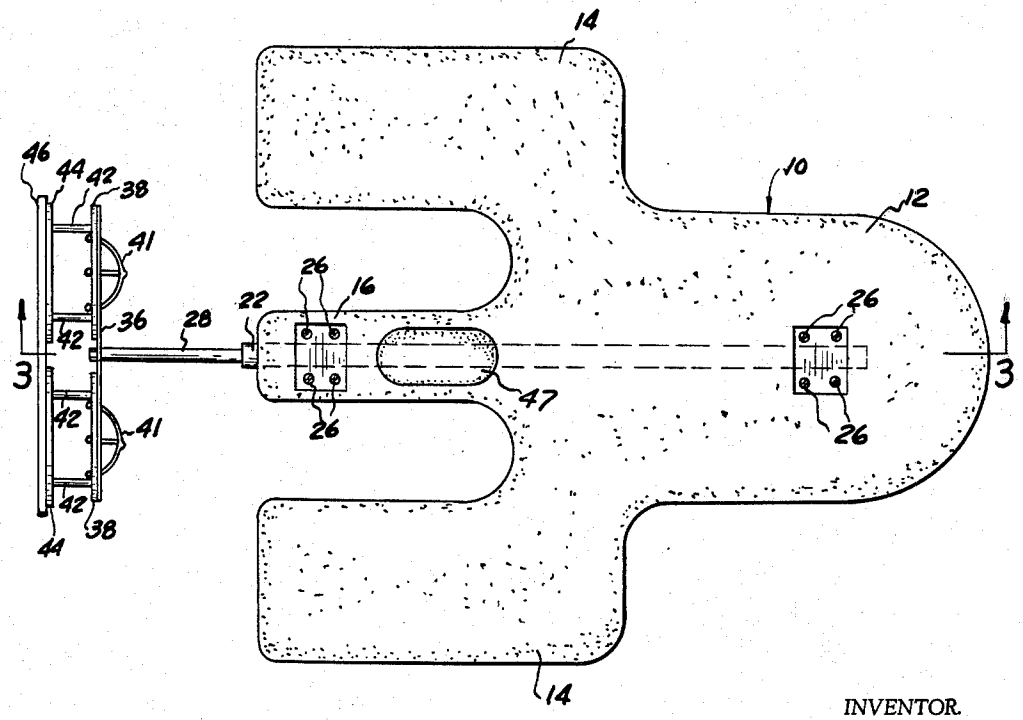


FIG. 1

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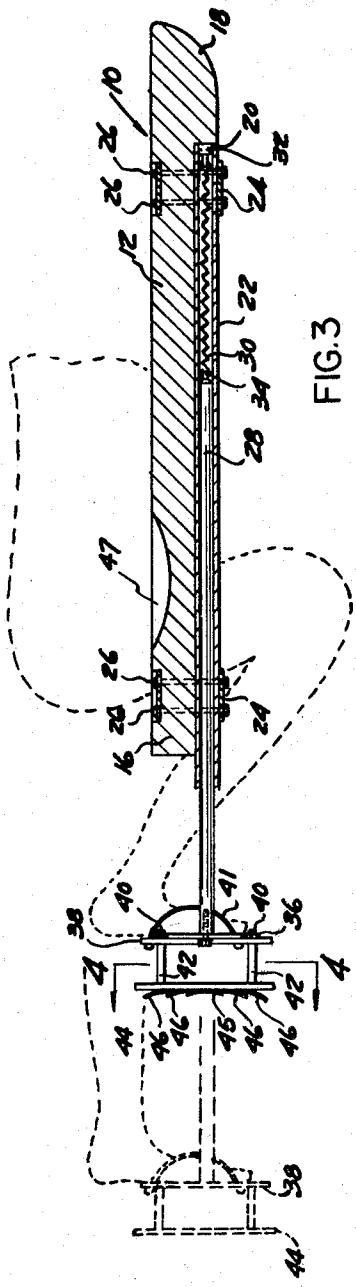


FIG.3

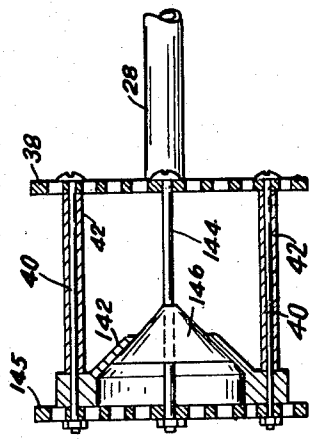


FIG.5

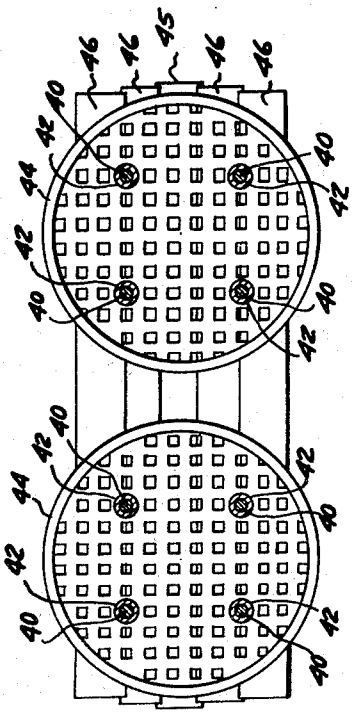


FIG.4

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SWIMMER'S FLOAT

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Filed July 15, 1963, Ser. No. 294,871
3 Claims. (Cl. 115—31)

The present invention relates to floatable devices and more particularly to such a device adapted to carry a swimmer and having means actuated by leg motion of the swimmer to propel the device through the water.

Heretofore floating devices for swimmers either have not been provided with means to provide extra propulsion beyond that produced by the normal swimming motion or if such means have been provided the quite complex mechanism used to produce the desired propulsion has made the manufacturing costs prohibitive.

It is an object then of the present invention to reduce the manufacturing costs of swimmer propelled floating devices by providing such a device having economically constructed propulsion producing means.

It is another object of the present invention to provide a swimmer propelled floating device by providing a floatable body adapted to carry a swimmer and a means carried thereby for producing propulsion upon movement of the swimmer's legs.

Still further objects of the present invention will readily occur to one skilled in the art to which the invention pertains upon reference to the following drawings in which like reference characters refer to like parts throughout the several views and in which:

FIG. 1 is a top plan view of one preferred embodiment of the present invention.

FIG. 2 is a perspective view of the embodiment illustrated in FIG. 1.

FIG. 3 is a longitudinal cross sectional view of the preferred embodiment illustrated in FIG. 1.

FIG. 4 is a cross sectional view as seen substantially from line 4—4 of FIG. 3, and

FIG. 5 is a fragmentary sectional view of a valve member of another preferred embodiment of the present invention.

Now referring to the drawings for a more detailed description of the present invention, FIGS. 1–4 illustrate one preferred embodiment as comprising a floatable body member **10**. As can best be seen in FIGS. 1–3 the body member **10** is preferably formed to provide an elongated forward portion **12** adapted to carry the head and upper body portion of a swimmer. Side portions **14** extend from and are substantially parallel with the forward portion **12** to provide support for the arms of the swimmer. A medial portion **16** extends from the forward portion **12** to a position intermediate and parallel with the side portions **14**. The leading edge **18** of the forward portion **12** is preferably rounded as can best be seen in FIG. 3. The body member **10** is constructed of any suitable floatable material such as Styrofoam or the like.

As can best be seen in FIG. 3, the lower surface of the body member **10** is provided with a substantially centrally located elongated recess **20**. A tubular member **22** is carried in the recess **20** preferably by longitudinally positioned brackets **24** secured to the body member **10** as by bolts **26**. A second tubular member **28** telescopes into the tubular member **22**. A spring member **30** is carried by suitable fixtures **32** and **34** secured to the ends of the tubular members **22** and **28** respectively to urge the tubular member **28** toward the solid line position shown in FIG. 3.

As can best be seen in FIGS. 1–3, a support bracket **36** is secured to the free end of the tubular member **28**. A perforated foot support member **38** is carried on each side of the tubular member **28** by bolts **40** and the bracket

36. A strap **41** is secured to each of the members **38** to receive a foot of the swimmer. The bolts **40** are provided with spacers **42** to retain a perforated member **44** in a spaced position from each of the foot support members **38**.

In the preferred embodiment illustrated in FIGS. 1–4 a centrally located flat member **45** and a plurality of overlapping flap members **46** are provided extending between and substantially covering the rearwardly facing surface of the perforated members **44**. The centrally located flap member **45** is preferably secured to the perforated members **44** on a line substantially along the longitudinal axis thereof and the flap members **46** are preferably secured to the perforated members along the longitudinal edge which is closest to the central flap member **45**. The flap members **45–46** are preferably constructed of any suitable resilient material such as rubber or the like.

The swimmer positions himself as shown by the dotted lines in FIGS. 2 and 3 with his head and body resting on the forward portion **12**. A central depression **47** in the upper surface of the body **10** accommodates the swimmer's body in a comfortable manner. The side portions **14** provide support for the arms and the feet are received by the straps **41**. To propel the device forward, the legs are extended to the dotted line position shown in FIG. 3 to move the tubular member **28** outwardly against the force of the spring member **30**. The force of the water against the flap members **45–46** prevents them from opening and since little water can pass through the perforated members **44** the device will be propelled forward. As the legs of the swimmer are drawn toward the body, the tubular member **28** will be urged by the spring member **30** toward the solid line position shown in FIG. 3. During retraction of the tubular member **28** the force of the water through the forwardly facing surface of the perforated members **44** will open the flap members **45–46** to permit water to pass therethrough to prevent a backward propulsion as the device is moved into position for the next stroke.

FIG. 5 is a fragmentary illustration of another preferred valving means of the present invention. A frustoconical valve seat member **142** is carried in a position longitudinally spaced from each of the foot support members **38** by means of bolts **40** and spacers **42**. A valve guide **144** is carried between the foot support member **38** and a perforated member **145**. The valve guide **144** is positioned to extend substantially axially through the seat member **42** and provides the means by which a valve member **146** is axially slidably carried.

It is apparent that the float device using the valve means illustrated in FIG. 5 will operate substantially similar to the device described above. During movement of the legs away from the body the force of the water will close the valve member **146** to produce the desired forward propulsion. During retraction of the legs the force of the water will open the valve member **146** to prevent backward propulsion.

It is also apparent that although I have described several embodiments of my invention other changes and modifications can be made without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A device for use by a swimmer, comprising:
   (*a*) a buoyant body member formed in a thick planar configuration and having a central forward section and a pair of side sections attached to and disposed on opposite sides, and displaced rearwardly with respect to the forward section;
   (*b*) a first tubular member supported on one side of said central section and extending between said side

sections and projecting rearwardly from said central section beyond the projection of side sections;

(*c*) a second tubular member operative to telescope with and being slidably supported by said first tubular member so that it may be disposed in a first, retracted position wherein its length is substantially telescoped within said first tubular member or a second, extended position wherein a substantial portion of its length extends beyond said first tubular member;

(*d*) a propelling member carried on the free end of said second tubular member and having an extension in a plane perpendicular to the axis of said tubular members;

(*e*) valve means carried by said propelling member and operable to close a passage through said propelling member at such time as said second tubular member is moved from its retracted position to its extended position and to open said valve means at such time as said second tubular member is moved from its extended position toward its retracted position;

(*f*) and foot support means carried on said propelling member and operative to engage the legs of an operator supported with his trunk on said central portion of the body member and his arms on said side portions of the body member.

2. The structure of claim 1 wherein said valve means comprise a substantial frusto-conical passage substantially coaxial with said tubular members and having its point facing in the direction of said tubular members and a conical valve member axially movable within said passage and adapted to be urged by water pressure so as to close said passage upon movement of said second tubular member from its retracted to its extended position and to open said passage upon movement of said tubular member from its extended to its retracted position.

3. The structure of claim 1 wherein said valve means comprise a perforated member having a forward facing surface and a rearward facing surface carried by said second tubular member in a position with said surfaces substantially transverse to the line of movement of said second tubular member and a resilient flat member having an edge portion secured to said rearward facing surface and its opposite edge free and operable to open and close a water passage through said perforated member as said second tubular member is moved toward and away from its retracted position.

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RALPH D. BLAKESLEE, *Examiner.*