United States Patent [19]

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[54] **WATER SHOES**

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[52] **U.S. Cl.** ..... **36/2.5 AA**

[51] **Int. Cl.** **A43b 00/00**

[58] **Field of Search** ..... 36/2.5 AA, 2.5 AB, 36/2.5 R

[56] **References Cited**

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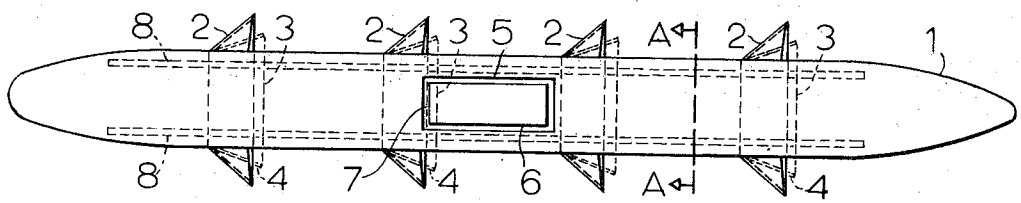
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[57] **ABSTRACT**

This invention consists of shoes for walking on the surface of water as a sport or recreation. It consists primarily of a foam plastic, streamlined, solid throughout pontoon for each foot of the wearer. The pontoons are provided with flexible fins which are wrapped around the sides and bottom of, and attached to, the pontoon. These fins open up to resist backward motion thereby providing traction, and close against the bottom and sides of the pontoon to reduce drag during the forward motion. Also, when the fins are closed, folds are formed at the bottom corners of the pontoon to provide additional stability.

3 Claims, 4 Drawing Figures



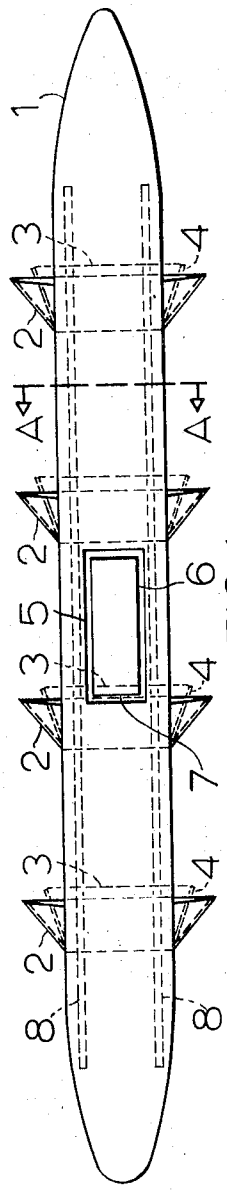


FIG. 1

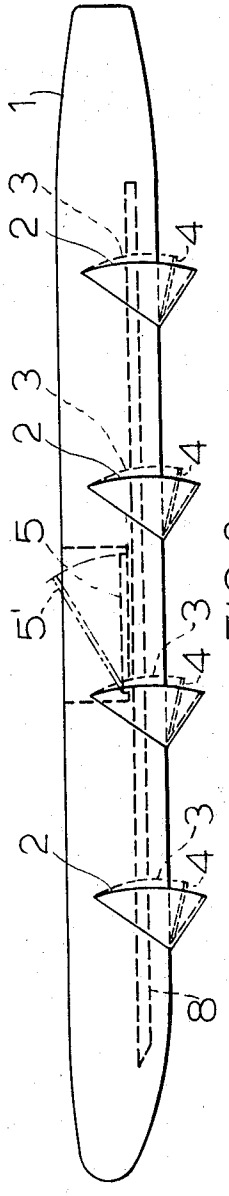


FIG. 2

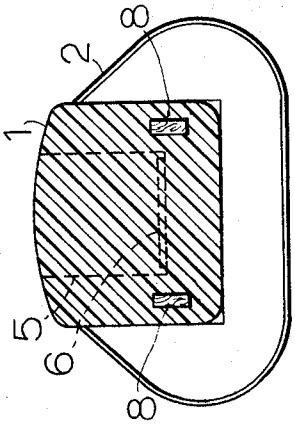


FIG. 3

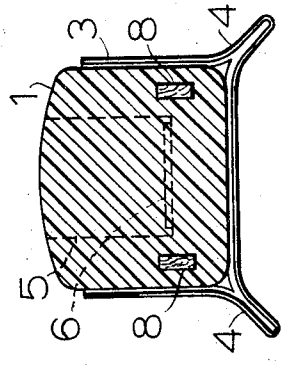


FIG. 4

WATER SHOES

This invention relates generally to a type of shoe intended for walking on the surface of water, for sport or recreational purposes and particularly to shoes of this nature which consist of comparatively large pontoons made of a very light waterproof material.

Many such shoes, prior to this invention, have been placed upon the market, but all met with little sucess because their structure and design did not take into consideration all the factors which are involved in a water walking operation.

These factors are,

a. The shoes must displace sufficient volume of water to support the weight of the user and at the same time to draw a minimum possible depth. To accomplish this requirement, the pontoon which forms the main body of the shoe must be of a comparatively large size for the displacement of water over a large area. When this pontoon is this large in size, it must of course, be made of a very light but rigid material.

b. In order to make these shoes operable in an efficient manner, the pontoons are provided with fins attached to their bottoms or sides in order to provide traction to the person doing the walking. This is accomplished by the fins by reacting against the water to prevent backward movement of the pontoon. However, an improperly designed set of fins will also cause a large amount of drag during the forward movement of the shoe. This condition will make the walking very difficult and tiresome.

One of the objects of this invention, is to provide shoes for walking on water in which the above mentioned difficulties are eliminated or considerably reduced.

Another object of the invention is to provide additional lateral stability to the shoes, and

Yet another object of the invention is to have these shoes manufactured in the simplest possible manner by considerably reducing its number of parts.

This is accomplished in the invention by the use of solid throughout pontoons which are large enough to support the weight of the user without drawing too much water, and which are at the same time made of a very light material which does not present a weight problem to the user. In addition, the fins which are made of a flexible material, are attached to and wrapped around the bottom and sides of the pontoon so that on the forward motion of the foot, the fins fold back against their walls and bottom to provide a minimum of drag; while on the backward pressure of the foot, the water opens the fins and offers a maximum of resistance. As will be further described, the folding of the fins also provides lateral stability.

In describing the invention reference will be made to the attached drawings in which,

FIG. 1 is a plan of the invention

FIG. 2 is an elevation of the invention

FIG. 3 is a view along section A—A showing the fins in an open position, and

FIG. 4 is section A—A showing the fins in a closed position.

In the drawings, the main body 1 of the shoe is shown consisting of a long, mainly rectangular, solid pontoon which is tapered at each end to provide a degree of streamlining. The body 1 is preferably made of a foam plastic such as styrofoam or similar material.

Along its sides and bottom, the body 1 is provided with a plurality of spaced fins which are shown opened at 2 and closed at 3. These fins are hingedly attached to the sides and bottom of the body 1 and are made of a water proof material which is flexible enough to be opened, closed, and folded by the action of the water. The outer shape of the fins 2 is approximately as shown in FIG. 3. In the closed position 3, the sides of the fin hug the sides of the body 1 while the bottom part of the fin hugs the bottom of the body 1, so that the excess areas of the fin form into a fold 4, at each bottom corner of the body 1. These folds help to stabilize the pontoons during their forward motion.

The body 1 is provided with a cavity 5 into which the user can insert his foot. On its bottom, the cavity 5 is provided with a foot plate 6 which is hinged at 7 to the bottom of the cavity 5. Various types of plastic, leather, or mechanical means for attaching the shoe to the foot (not shown in the drawing) can be provided to the foot plate 6.

Spaced wooden reinforcement bars 8,8, can be provided to the body 1 for rigidity and durability, and various water resistant paints or coatings can be used to cover the outside surface of the pontoons.

Having described the invention, what I claim is,

1. A shoe, for each foot of the wearer, for walking on the surface of water, comprising a streamlined, solid throughout pontoon, generally of rectangular cross-section, and made of very light but rigid plastic material; a plurality of spaced fins of a flexible material attached to said pontoon and wrapped around its bottom and sides, each of said fins extending outwardly from the sides of said pontoon, and downwardly past the bottom thereof to form a pocket to provide water resistance against the backward movement of said pontoon, said fins closing against the walls and bottom of said pontoon by the action of the water, during the forward motion of the pontoon to reduce water drag, and said fins being so shaped as to form an outwardly extending fold from each bottom corner of said pontoon to provide additional stability; and a cavity provided in the upper part of said pontoon for the insertion of the wear's foot therein, said cavity having a hinged foot plate at the bottom thereof equipped with standard foot attachments for binding the said shoe to the foot.

2. A shoe such as described in claim 1, the pontoon of which is provided with longitudinal reinforcement bars therein to provide additional rigidity.

3. A shoe such as described in claim 1 the pontoons of which are painted or otherwise covered on their outer surface with a waterproof paint or other waterproof covering.

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