ABSTRACT OF THE DISCLOSURE

The disclosure describes a device of general utility which can be used as a beach shoe for walking on sand, a hand paddle for use in swimming, a seat for use on a beach, and a sun shade for use on the head. The device has as disk-like body in the form of a segment of a sphere. It is provided with a flexible strap. It is very light in weight and strong enough to support a person’s weight. It is preferably made of closed cell polystyrene.

The invention concerns a beach shoe which has multiple other uses on a beach, at a shore, or in the water. According to the invention there is provided a device comprising a disk which has a thickness of about three-quarters of an inch. It is formed as a segment of a hollow sphere with a concave inside or underside and a convex outer or upper side. A flexible strap is engaged in large holes in the disk to facilitate engagement of the strap on a hand or foot. The disk can be round, oval, hexagonal, or of other regular geometrical shape. The disk is preferably made of rigid closed cell polystyrene so that it is very strong, but very light in weight. The disk will weigh only about an ounce but it can support the full weight of a person without collapsing or deformation. Small, supplementary holes can be provided to relieve suction when walking on wet sand.

It is therefore a principal object of the invention to provide a beach shoe and hand paddle comprising a disk in the form of a section or segment of a hollow sphere, the disk being very light in weight and strong enough to stand the weight of a person.

A further object is to provide a device as described, wherein the disk has oversize holes in which is engaged a flexible strap. Another object is to provide a device as described made of rigid, closed cell polystyrene material.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings and to the preferred embodiment in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIGURE 1 is a perspective view of a device embodying the invention.

FIG. 2 is a top plan view of the device shown used as a hand paddle.

FIG. 3 is a side elevational view of the device.

FIG. 4 is a bottom plan view of the device taken on line 4—4 of FIG. 3.

FIG. 5 is a cross sectional view taken on line 5—5 of FIG. 3, the device being shown used as a beach shoe for walking on sand.

FIG. 6 is a top plan view of another device embodying the invention.

FIG. 6A is an enlarged fragmentary sectional view taken on line 6A—6A of FIG. 6.

FIG. 7 is a side elevational view of the device of FIGS. 6 and 6A shown used as a sand shoe, beach shoe.

FIG. 8 is a top plan view of another device embodying the invention.

FIG. 9 is a reduced side elevational view taken on line 9—9 of FIG. 8.

FIG. 10 is a cross sectional view taken on line 10—10 of FIG. 8.

Referring first to FIGS. 1—5, there is shown the device 10 comprising a circular disk 12. The disk is a section of a hollow sphere. It has a concave inner side or underside 14 and an upper or outer convex side 16. The disk is made of strong, lightweight, closed cell polystyrene to that it is buoyant in water. In diametrically spaced positions in the disk 12 are two holes 18. Extending through these holes is a strap 20. The strap is made of elastic material preferably rubber. The thickness and width of the strap is less than the width and length of the holes so that air can pass freely through the holes as indicated by arrows A in FIG. 5. A buckle 22 on the strap enables the strap to be engaged over a hand 23 as indicated in FIG. 2 or over a foot 24 as indicated in FIG. 5. Ribs 25 on the strap enable the buckle to engage a required length of strap over the hand or foot to hold the strap snugly. The disk has a beveled circumferential edge 27 extending radially inwardly to meet the circular edge 29 of underside 14.

In its preferred form the inner side 14 of the disk has a diameter D of about eight inches. The thickness T of the disk is approximately three-quarters of an inch and substantially equal to the maximum depth or central height H of the cavity C. The radius of curvature inner side 14 is about ten inches and the radius of curvature outer side 16 is about eleven inches. This structure will enable the disk to support the weight of a person when using the device as a shoe as indicated in FIG. 5 for walking on sand S. The large holes 18 will relieve suction as indicated by arrows A so that the shoe can easily be lifted even from wet sand. The round concave side 16 will provide a very effective supporting surface on wet or dry sand so that a person can walk straight without wobbling on sand.

FIG. 2 illustrates the use of the device 10 as a hand paddle. The strap encloses the hand 23 excluding the thumb 25. The palm of the hand abuts the outer side 16 of the disk. This will be a very effective water paddle and will enable a person to swim more rapidly and stably than otherwise would be possible without the device. Normally of course, a person will wear two similar devices 10 on his two hands for paddling, or on his two feet for walking.

FIGS. 6, 6A and 7 show device 10A which is generally similar to device 10. Disk 12A has a concave underside 14A and a convex outer side 16A. The disk 12A is oval in form. This shape may be desirable for a person having a longer than average hand 23A or having a longer than average foot 24A. The minor diameter or axis D’ of the disk 12A across edge 29A will be about eight inches, the same as the diameter D of disk 12. The major diameter or axis D’’ of the disk 12A will be about twelve inches.

Supplementary holes 30 can be provided near the periphery of the disk radially inward of beveled edge 27A. These holes will not interfere with use of the device as a hand paddle. However, for walking, the holes 30 will admit air to relieve suction when walking on sand, as indicated by arrows A’ in FIG. 6A. Other parts of device 10A corresponding to device 10 are identically numbered.

FIGS. 8—10 show another device 10B in which the disk 12B is hexagonal in form with outer convex side 16B. The diameter D of the edge 29B of underside 14B is about eight inches and the same as that of disk 12. Supplementary holes 30’ radial spaced inward of beveled edge 27B admit air and relieve suction in the cavity C’ under disk 12B. Other parts of the device corresponding to those of devices 10 and 10A are identically numbered.

In all forms of device described the entire device weighs no more than two ounces so that it can be worn on the hand or foot without discomfort and without inter-
ference with its basic functions. It is not intended that
the device be used as a foot paddle. It will work most
efficiently as a hand paddle. However, it will serve as a
beach shoe in walking on dry or wet sand very efficiently.
The device when on the hand can serve for paddling a
 canoe. It is also good for use on the hand for people and
children learning how to swim.

Since the device is very strong and can support the
weight of a person, it can even serve as a seat on loose,
dry sand. A person sitting on the device will be supported
in a stable, upright position. The device can if desired, be
placed on a person’s head to serve as a sunshade. The
strap 20 will engage under the person’s chin to hold the
device in a stable position on the head.

The device can also be used on the hand for playing
hand ball. In addition the device is so shaped as to pro-
vide a good arch support for the feet. It can be of ir-
regular shape as well as of regular geometric shape.

What is claimed is:

1. A device to facilitate walking on sand and hand
paddling in water comprising a disk formed as a section
of a hollow sphere, said disk having a regular geometrical
shape in plan view, said disk being formed with opposite
concave and convex sides and with a beveled peripheral
edge extending inwardly from the peripheral edge of the
convex side to the peripheral edge of the concave side,
said concave side having a minimum width of at least ap-
proximately eight inches so as to support a person stable
while walking on sand and to propel a person rapidly
through water while swimming, said disk having spaced
holes aligned diametrically of the disk; and an elastic
strap engaged in said holes for holding the disk on a per-
son’s hand when paddling in water the disk being of a
weight less than two ounces and being made of closed

 References Cited

UNITED STATES PATENTS
1,793,937  2/1931 Knudsen
3,116,498  1/1964 Larson

FOREIGN PATENTS
97,264  12/1922 Switzerland.

MILTON BUCHLER, Primary Examiner.
J. PITTENGER, Assistant Examiner.

U.S. Cl. X.R.

9—307