A swimming device that includes a member made of a flexible material that has bands or straps thereon for engagement by the user's hands or feet.
COMBINATION HANDS-AND-FEET SWIMMING FINS

This invention relates to swimming devices or swimming fins, and more particularly to swimming fins that can be used on the hands or feet of the user.

There have been prior patents granted on swimming devices, such as prior U.S. Pat. Nos. 1,522,526, 2,078,068, 2,726,410, 3,112,503, 3,174,167. However, the present invention possesses certain important differences or advantages over such prior patents.

A primary object of this invention is to provide combination hands-and-feet swimming fins that consist of a flexible body member made of a suitable material such as rubber, or plastic, or the like, and wherein the member has bands for engagement by a person's fingers or toes, and wherein there are also provided straps for engagement by a person's wrist or ankle.

Still another object is to provide such combination hands-and-feet swimming fins that provide increased flexibility, so that the parts can flex or bend in the desired manner, and wherein maximum efficiency is provided in using the device in a body of water, and wherein, when desired, an insert is adapted to be used to help protect the bottom of the feet.

Further objects and advantages are to provide improved elements and arrangements thereof in a device of the character described that is economical to produce, durable in form, and conducive to the most economical use of materials and uniformity of members formed therefrom.

Still further objects and advantages will become apparent in the subsequent description in the specification.

In the drawings:

FIG. 1 is a perspective view, illustrating one of the fins in position on a swimmer's hand.

FIG. 2 is a top plan view of one of the fins with the parts in the position of FIG. 1.

FIG. 3 is a side elevation view, illustrating the device in position on a swimmer's hand.

FIG. 4 is a sectional view, taken on the line 4-4 of FIG. 3.

FIG. 5 is a perspective view illustrating an insert that is adapted to be used with the device, and showing a hook that can be used for suspending the swimming fin from a suitable location, such as a belt, when the device is not being used.

FIG. 6 is a perspective view illustrating how the device is worn or used on a person's foot.

FIG. 7 is a side elevation view showing the device in use on a person's foot.

FIG. 8 is a perspective view, illustrating the device suspended from a person's hand when the device is not being used.

Referring in detail to the drawings, the numeral 30 indicates a combination hand-and-feet swimming fin that includes a body member 31 made of a generally flexible material such as plastic or rubber. The body member 31 includes spaced-parallel side edges 32, spaced-apart straight end edges 33 and 34, and inclined corner edge portions 35 and 36.

The body member is further provided with a plurality of spaced-parallel slots such as the slots 37, 38, 39, 40, 41 and 42. These slots define or provide in the body member a plurality of straps 43, 44, and 45. The straps 43, 44 and 45 are of different length due to the fact that the slots 37 through 42 are of varying sizes. The straps 43 and 44 extend inwardly from the side edges 32 of the flexible body member. As shown in FIG. 2, for example, the strap 44 is slightly longer than the strap 43 and the strap 45 is slightly longer than the strap 44. The numeral 46 illustrates a portion of a person's hand which has the fingers 47 extended through the straps, and the thumb 48 is adapted to be arranged exteriorly of the straps. Likewise, the thumb 49 may be positioned exteriorly of a strap such as the strap 45 when the device is being used.

The body member 31 is further provided with a plurality of curved slotted portions 50 which define therebetween arceuate bands or strap portions 51 and 52 for selective engagement with a portion of the user's body such as the wrist 53.

As shown in the drawings, eyelets may be provided in an end portion of the body member 31, whereby a member such as a hook 55 can be arranged in engagement with one of the eyelets 54 so that the device can be conveniently suspended from the user's belt or the like, when the device is not being used.

Referring to FIGS. 6 and 7 of the drawings, there is shown one of the fins being worn or used on a swimmer's foot 56, and the numeral 57 indicates a portion of the user's ankle, while the numeral 58 indicates the toes of the user's foot. The numeral 59 indicates an insert that is adapted to be used on the device just below the sole of the foot, and the insert 59 includes arcuate sections 60, as well as arcuate or curved portions 61. The insert 59 further includes diametrically opposed cutouts or slots or grooves 62 which snugly receive or engage a portion of the band 44 to help maintain the insert in place on the device when the device is being used on a person's foot.

From the foregoing, it will be seen that there has been provided combination hand-and-feet swimming fins, and in use with the parts arranged as shown in the drawings, the swimming fins may be used on the hands as shown in FIGS. 1 through 4, and in addition the fins may also be used on the feet, as for example, as shown in FIGS. 6 and 7. When using the device on the hands, the fingers, such as the fingers 47, may be conveniently inserted through the straps such as the straps 43, 44, and 45, and the thumb 49 and little finger 48 may be arranged outside of the straps, as shown in the drawings, so that a firm and comfortable grip is obtained. In addition, the wrist 53 of the user is adapted to be engaged by a strap or band 51 so that the device will be maintained in its proper position on the hand 46 of the user.

The device is made substantially of a single piece of flexible material, such as rubber or plastic having the desired degree of stiffness. However, the device can readily flex or bend so that, for example, the parts can be moved manually from the solid-line position of FIG. 3 to the dotted line position of FIG. 3, and this provides increased flexibility for the hands and fingers of the user. It is to be understood that one of the devices 30 may be arranged on each of the hands and feet of the user as desired or required.

When the device is not being used, a hook such as the hook 55 can be arranged in engagement with an eyelet 54, so that the device can be conveniently supported from a user's belt or other location.

In addition, as shown in FIG. 8, when the device is not being used, it can be conveniently maintained on the user's wrist by permitting the band 51 to engage the fingers of the hand to remain free of the straps 43, 44, and 45.

When the device is being used on the feet of the user, an insert, such as the insert 59 is adapted to be positioned in engagement with the member 30, as shown in FIGS. 5, 6 and 7. The insert 59 is provided with diametrically opposed grooves or cutouts 62 that engage a strap such as the strap 44, so as to maintain the insert stationary in its proper location. Also, when the device is being used on the feet, the band 51 is adapted to engage the upper portion of the foot, as shown in FIG. 7, and the band 52 engages the lower portion of the foot as shown in the drawings, whereby this provides a positive means of maintaining the device connected to the foot.

The various parts such as the bands and straps are arranged and constructed so that the parts can be readily inserted therein or removed therefrom when desired, and in addition, these parts serve to insure that accidental disengagement of the swimming fins from the hands and feet will be prevented.

The parts can be made of any suitable material and in different shapes or sizes, as desired or required.

The swimming fins of the present invention will give the wearer a greatly increased pulling power in swimming so that greater enjoyment of the sport can be accomplished or provided. The device may be molded of rubber or semi-plastic and can be made in different sizes, such as large, small and medium. The bands or straps 51 and 52 serve to hold the device in place on the hands or on the feet. Also, when the device is
being used on the feet, easier walking is assured as compared with regular style flat fins. The wearer can slip the fins off the hands or feet easily, if needed. The devices are reversible or interchangeable, so that they can be used on either the right or left hands or right or left feet, as desired. Due to the flexibility of the devices, as shown in FIG. 3, the hand fins enable the wearer to hold on to any object.

The present invention is characterized by its simplicity in construction, and the device is constructed so that it can flex or bend where needed. Also flexing action is permitted for both the hand and feet fins, without requiring any straps or the like to bind the user, and the entire device consists of one lightweight piece of rubber or plastic, with a series of cutouts or slots that are arranged to hold the fins in place without any straps or other complicated parts to manufacture, so that the device can be economically produced.

Also, when the hand is placed in the fin slots or straps, as shown in FIG. 4, for example, the fin forms a concaved cup-shaped member which has a tendency to form a suction effect at the point 63 that assures greater pushing power. In addition, this slightly concaved configuration that is assumed by the fin, as shown in FIG. 4, helps provide the necessary rigidity.

The rear slanted slots 50 are offset to the rear of the fin to provide the straps or bands 51 and 52. The present invention is practical to use for swimming uses, and the devices are light in weight and will flex or bend in the desired manner. No straps are needed to bind the hands or feet in the fins, and the slanted slots serve as holding bands that are easy to slip in or out of by merely twisting the hands out of the slotted bands. One person can remove these fins by himself or herself, or if necessary. The fins will not tire out an overhand swimmer or the like, and in addition the fins of the present invention have the means for holding the device in place so that the device will not ordinarily get lost. There is nothing in the devices to trap and hold water. There are no extra gadgets to hinder the swimmer with extra weight and the like. Also, the flexing or bending action in the fins permits the user to grasp objects or structures when necessary.

No assistance is required from others to slip the fins on or off, since the user can readily release them by pulling the fingers out of the holding-slot bands. However, the fin will still hang onto his wrist by the rear holding-slot band or strap 51 to prevent loss of the hand fins when trying to hold onto any object, and the user will still have full use of his hands when necessary.

The parts are arranged and constructed so that the skin will not be pinched. When the fins are used on the feet, easy walking is assured, and in addition, the feet will not accidentally slip out of the fins. To release the fins, it is only necessary to pull the bands or straps thereof.

The insert 59 will cover the openings or slots to prevent cuts from sharp objects, such as rocks or the like, and the insert is used in the feet fins only.

The fins can be molded of polyethylene plastic, rubber or the like. An advantage of using polyethylene is that it floats naturally, which is essential for preventing loss of the fins in deep water.

Further, a belt-holding hookup of the fins can be used by lifeguards or the like when on duty, but when the fins are not in actual use, for carrying purposes and the like. This is important for lifeguards, for faster swimming, and requires less effort in saving a drowning person.

Because the fins are flexible, the hand can bend the fin and hold on to almost anything in the same manner as when a glove is being worn. In addition, the user can easily slip the fingers out of the slots and use the entire hand with the fins still hanging on to the wrist, without losing the fin in the water, and the fins can be readily slipped back into the slots. As is known, any wide and flat-shaped device attached to the feet of a swimmer assists in propelling the swimmer through the water to some degree. Thus, the fins will help propel a swimmer through water depending upon the skill of the swimmer. With the use of the fins, the swimmer will have increased pulling surface on his hand with these attached fins as compared to a person that does not have the fins on the hands. The fins will not merely fold themselves around the swimmer's foot due to the fact that they are rigid enough to hold their desired shape in the water, and the fins may be injected molded so that they will be slightly thicker and reinforced around the edges where needed to hold their desired shape and still be sufficiently flexible to bend, in order to hold on to things such as a surfboard and the like. The rear slots or holding bands of the fins may be curved or rectangular shaped as desired or required.

It will now be clear that there is provided a device which accomplishes the objectives heretofore set forth. While the invention has been disclosed in its preferred form, it is to be understood that the specific embodiment thereof as described and illustrated herein is not to be considered in a limited sense as there may be other forms or modifications of the invention which should also be construed to come within the scope of the appended claims.

I claim:

1. A combination hands-and-feet swimming fin embodying a flexible body member having spaced-parallel side edges, front and rear straight edges, and inclined edge portions at the corners of the body member, there being a plurality of slots in said body member defining straps of varying sizes, said straps terminating inwardly from the side edges of the body member, said straps adapted to be selectively engaged by portions of the hands and feet of a swimmer, curved slotted portions in the rear of the body member defining a plurality of arcuate bands for selective engagement with the hands and feet of the user, and said bands terminating inwardly from the sides of the body member.

2. The structure as defined in claim 1 and further including eyelets in said body member for engagement with a supporting hook, and an insert for use with the fin when the fin is on a foot, said insert including curved portions, and said insert having diametrically opposed grooves for engagement with portions of a strap.