ABSTRACT: The swimmer’s training device includes an elongated pocket assembly having sidewalls hingedly connected together in a side-by-side relation and foldable end walls extended between and interconnected with the sidewalls. The end walls are of a size to permit movement of the sidewalls to a spread apart position to form an angle of substantially 90°. With the pocket extended transversely of the longitudinal axis of the body of the swimmer, one of the sidewalls is secured flat against the forward side of the swimmer’s torso so that the pocket will open in the direction of swimming movement. Thus, during swimming the pocket is opened by the action of the water against the second sidewall which functions as a resistance member to impede the passage of the swimmer through the water. The resistance member is of a hinged construction to provide an outer foldable section that is foldable against the inner section of the resistance member to vary the resistance offered by the resistance member against the swimmer’s movement through the water.
RESISTANCE MEMBER ATTACHED TO A SWIMMER

SUMMARY OF THE INVENTION

The swimmer training device is of a unit construction formed of materials that are waterproof and relatively yieldable so as not to injure the swimmer should he accidentally strike the device. It is compact, efficient in operation to strengthen a swimmer and is readily secured to the swimmer's torso for use in either swimming on the stomach or on the back without interfering with a free normal movement of the swimmer. By virtue of the foldable construction of the resistance member the device is quickly adjustable to provide a variable resistance for use by swimmers of different aptitudes or at different stages in their training.

DETAIL DESCRIPTION OF THE INVENTION

Further objects, features and advantages of the invention will become apparent from the following description when taken in connection with the accompanying drawings in which:

FIG. 1 shows the device in assembled position on the body of a swimmer;

FIG. 2 is a perspective view of the device showing a resistance member that forms a part thereof illustrated in a folded position;

FIG. 3 is a perspective view illustrated similar to FIG. 2 showing the resistance member in an unfolded position;

FIG. 4 is an enlarged sectional detail view as seen along the line 4-4 in FIG. 3;

FIG. 5 is a developed plan view of the device with some parts broken away and other parts shown in section to more clearly show its construction; and

FIG. 6 is a sectional view taken along the line 6-6 in FIG. 5.

With reference to the drawings the swimmer training device of this invention, indicated generally as 10, is shown in FIG. 1 as applied to the body of a swimmer 11 and projected from the front side of the torso 13 when the device is used for stomach swimming. For back swimming the device 10 would be reversed so as to project from the back side of the torso.

The device 10 (FIGS. 2 and 3) is of a unit construction and includes an elongated pocket or scoop assembly 14 that has sidewalks 16 and 17 hingedly connected together at 18 in a side-by-side relation. For the purpose of convenience of description the sidewalks 16 and 17 will hereinafter be referred to as a fixed wall and movable wall, respectively. Foldable walls 19 are interconnected to the fixed wall 16 and movable wall 17 for movement to unfolded positions, shown in FIGS. 3 and 4, to provide for the movement of the movable wall or resistance member 17 to a position in a plane substantially normal to the plane of the fixed wall 16. End extensions 21 and 22 on the fixed wall 16 are secured to a strap section 23 and cooperating buckle section 24, respectively, which are connectable together in a well-known manner. The fixed wall 16, extensions 21 and 22, and strap sections 23 and 24 thus form an adjustable strap unit for encircling the swimmer’s torso 13 with the movable wall or resistance member 17 projected outwardly from the torso.

The pocket assembly 14 (FIG. 5) includes a pair of identical body members 26 and 27 of an irregular shape arranged in a back-to-back relation and formed of a flexible sheet material such as a vinyl plastic. Only the body member 26, therefore, will be described in detail and like parts of body member 27 will be designated by like numbers having the suffix A.

The body member 26 is integrally formed with a movable wall section 28 of a generally semicircular shape and a fixed wall section 29 of a generally rectangular shape. Cutaway portions 31 in the wall section 29 form generally triangular shaped end portions 32 on the movable wall section 28, and connecting portions 33 on the side of the wall section 29 remote from the movable wall section 28.

With the body members 26 and 27 superposed a pair of pliable backing members 34 and 36 formed of a stainless steel sheet material are inserted between the members 26 and 27 at the movable wall sections 28 so as to extend longitudinally of such sections between the triangular end portions 32 in a transversely spaced relation (FIGS. 4, 5 and 6). As clearly shown in FIG. 5 the adjacent inner sides 37 and 38 of the backing members 34 and 36, respectively, are of a straight form. The outer side of the backing member 34 is of a curvature corresponding to the curvature of the movable wall sections 28 on the outer side of the backing member 36 is curved concavely inwardly.

The body members 26 and 27 are sewed together along the marginal edges thereof by stitching, indicated at 39, and the backing members 34 and 36 are maintained in fixed positions by stitchings 41 and 42, respectively. The strap section 23 and buckle section 24 are inserted between the connecting portions 33 at the time the body members 26 and 27 are sewed together along their marginal edges, with additional reinforcing stitches 43 being provided.

As thus far described it is seen that the movable wall 17 is hingedly connected to the fixed wall 16, by virtue of the flexibility of the body members 26 and 27, along the junction line therebetween indicated at 18. Likewise, it will be noted that the portions of the movable wall 17 corresponding to the backing members 34 and 36 are hingedly connected between their adjacent inner sides, as indicated at 44, to provide for the front section of the wall or resistance member 17 being foldable toward the fixed wall 16 as shown in FIG. 2. This folded position of the front section of the movable wall 17, as defined by the backing member, 34, is retained by a usual fastening means that includes a button member 46 secured to the backing member 36 and a coacting socket member 47 secured to the backing member 34.

To complete the assembly of the pocket 14 the end triangular portions 32 (FIGS. 4 and 5) of the movable wall 17 have their free ends sewed to the end portions of the fixed wall 16 along the stitch lines shown at 48, whereby the parts of the end portions 32 located between the stitch lines 42 and 48 on the movable wall 17 form the foldable end walls 19 of the pocket assembly 14.

In the use of the device 10 for stomach swimming, and as shown in FIG. 1, the device 10 is strapped about the body of the swimmer 11 with the fixed wall 16 flat against the forward side of the torso 13 so that the pocket assembly 14 faces or opens in the direction of forward movement of the swimmer. The pocket assembly 14 is thus free of any interference with a side arm movement of the swimmer along with leaving the swimmer's legs completely unobstructed. On a forward movement of the swimmer the water will be acting against the movable wall or resistance member 17 moves such wall away from the fixed wall 16 until the end wall members 19 are extended to their unfolded positions shown in FIGS. 3 and 4. The movable wall 17 thus functions to resist the forward movement of the swimmer through the water by its scooping action in directing water into the pocket assembly 14.

To reduce the resistance effect of the wall 17 to the forward progress of the swimmer it is only necessary to fold the front section thereof along the hinge line 44 to a folded position within the pocket assembly 14, which folded position is maintained by the snap fastening members 46 and 47. The resistance member 17 is thus readily adjustable to vary the water impedance effect of the device 10 to accommodate varying swimming aptitudes and strengths of swimmers being trained.

For back swimming the pocket assembly 14 is arranged to project outwardly from the back side of the swimmer’s torso 13 so that it opens in the direction of forward movement of the swimmer.

By virtue of the vinyl plastic construction of the pocket assembly 14, along with the flexibility of the backing members 34 and 36 the device 10 is readily carried by the swimmer so as to conform to the configuration of the torso 13 and to eliminate any injury to the swimmer should he accidentally strike the device with his arms during swimming, or hit the device against an obstruction such as a chair or the like while waiting his turn for training instruction.
3,584,870

1 claim:

1. The training device for a swimmer to increase the resistance to the forward movement of a swimmer's body through the water comprising:

a. a water receiving pocket means adapted to extend transversely of the longitudinal axis of the swimmer's body including a first sidewall positionable against the swimmer's torso and a second sidewall,
b. means pivotally connecting together said two sidewalls in a side-by-side relation,
c. a pair of foldable end walls, each of which is interconnected between said two sidewalls, said end walls, being movable to unfolded positions wherein said second wall is located in a plane substantially normal to the plane of said first sidewall,
d. means for securing said first sidewall to the swimmer's torso so that said pocket means is openable by the forward movement of the swimmer through the water,
e. said second sidewall including a main section and a foldable front section,
f. means hingedly connecting said front section to said main section,
g. said front section being pivotally movable into said pocket means to a folded position against said main section, and
h. means releasably securing the front section to the main section in said folded position therefor.