

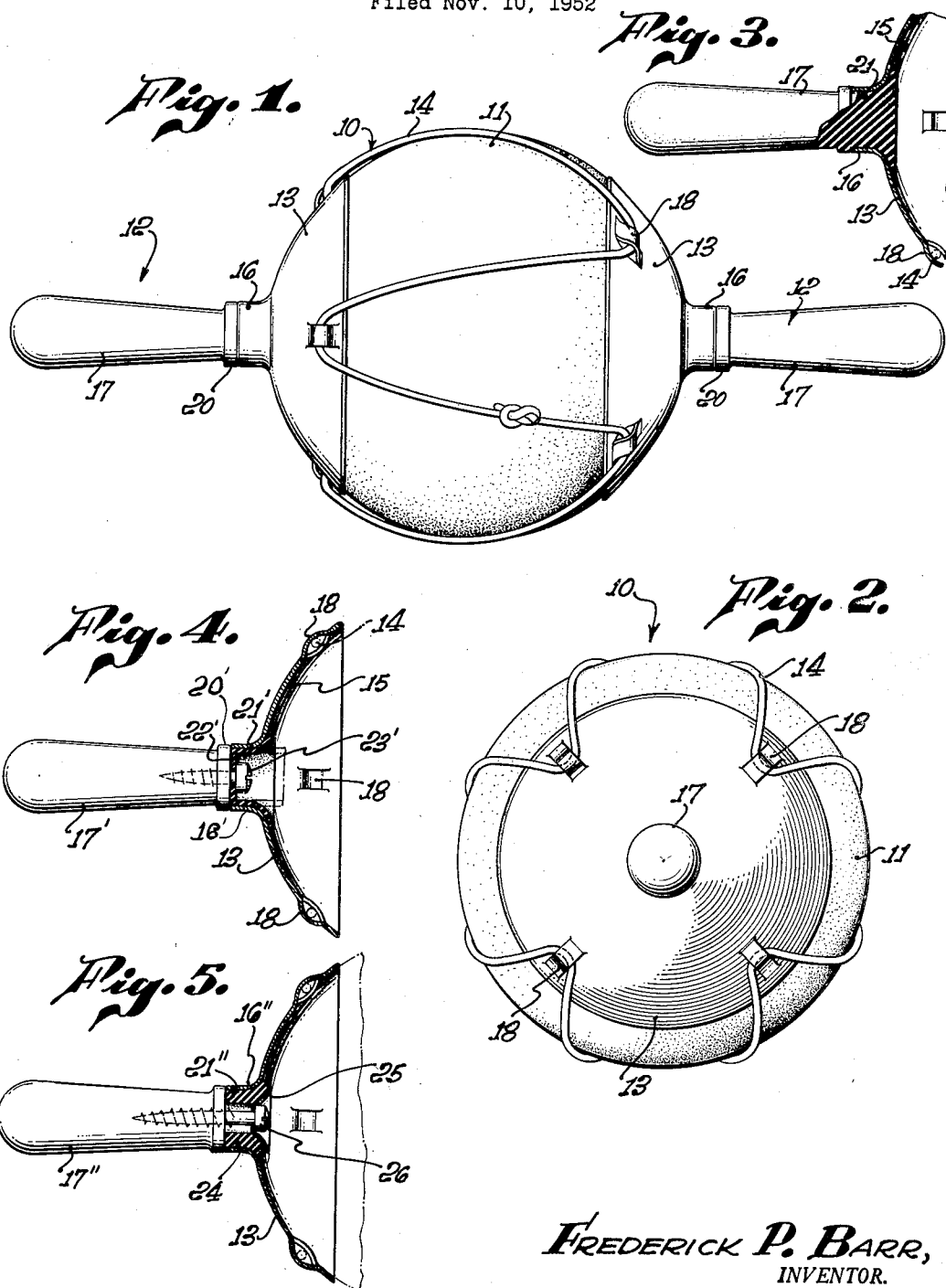
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SWIMMING AID DEVICE

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SWIMMING AID DEVICE

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This invention relates to a swimming aid device and more particularly to a floatable, spherical object provided with spaced hand-hold means for supporting in water the head and arms of an individual to facilitate swimming instruction and training, and for use as an aquatic sport device.

Instruction of beginning pupils in swimming includes the separate training and exercising of leg movement in order to teach effective swimming leg kicks. Usually, swimming leg movements are taught while pupils hold onto the sides of a swimming pool with their hands, their bodies being extended virtually horizontally in the water. Such a method of teaching leg movements does not afford the pupil a means for measuring the effectiveness of his leg kick since forward movement of the body is prohibited by the side of the pool.

Floatable objects such as inner tubes, inflated balls, and kick boards or surf boards have been unsuccessfully used for teaching swimming leg movements because of the difficulty of grasping and holding onto such objects. Inflated inner tubes and balls tend to slip away from a swimmer in the water and his arms are held in an unnatural swimming position in order to grasp the tube or ball. In addition, the center of buoyancy of such objects is spaced relatively far forward from the hands and from the head and shoulders of the swimmer and thus do not adequately support the head and shoulders of his body in swimming position.

Surf boards and kick boards provide a more easily grasped object for practicing swimming leg movements but these devices are subject to the same objection as the other floatable objects in that the center of buoyancy of the kick or surf board is spaced too far forward and the head, shoulders and arms of the swimmer are not adequately supported so that he may effectively practice leg movements. The latter devices are suitable for expert swimmers to improve their kick, but they are not suitable for beginners who are reluctant to allow their heads to sink below the level of the water. An inflatable ball such as a beach ball of any size is extremely elusive in the water and is difficult to grasp and hold.

This invention contemplates a swimming aid device wherein the center of buoyancy of the swimming aid is positioned most effectively between the hands of the swimmer and in such a manner that the head and shoulder portions of a swimmer may be adequately kept above the surface of the water. The buoyancy provided is sufficiently great so that the beginning swimmer will be afforded a support substantially the equivalent as that provided by holding to the side of a swimming pool. Convenient hand-holds are provided which may be readily grasped and when the arms are extended in normal and spaced relationship unnatural strain or awkwardness of position is not placed upon the shoulders or head of the beginning swimmer. Progress of the effectiveness of the swimmer's leg movement may be readily determined by the beginning swimmer by measuring his rate of forward

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advance in the water. Such advance is not hindered by the swimming aid device of this invention.

The primary object of this invention is to design and provide a novel swimming aid device for effectively and conveniently supporting head and arms of a swimmer in a comfortable position while practicing leg swimming movements.

An object of this invention is to design and provide a novel swimming aid wherein the center of buoyancy of said aid is effectively disposed between the hands of a swimmer using the device.

Another object of this invention is to design and provide a swimming aid device which is readily controllable by the user.

Another object of this invention is to design and provide a novel swimming aid device wherein a floatable object is employed on which hand-hold means are attached in novel manner.

Still another object of this invention is to design and provide a swimming aid device which may be conveniently and effectively assembled.

A further object of this invention is to design and provide a swimming aid device which is inexpensive and easy to manufacture, is simply constructed and is effective to support a swimmer in various positions in the water.

The invention contemplates a swimming aid device as described wherein a readily inflatable ball or other floatable object may be provided with hand-hold means removably secured to the ball in diametrically opposite position. The hand-hold means include discs or mounting plates each having a concave face pressed against the ball by tightly drawn lashing means connecting the plates. Each plate carried a hand-hold. The invention contemplates that such a swimming aid may not only be used for swimming instructional purposes, but may also be used as a sport device for aquatic games and activities.

Other objects and advantages of this invention will be readily apparent from the following description of the drawings in which an exemplary device embodying this invention is shown.

In the drawings:

Fig. 1 is a side elevational view of a swimming aid device embodying this invention.

Fig. 2 is an end view of Fig. 1.

Fig. 3 is a fragmentary sectional view of a hand-hold means employed with the device shown in Fig. 2.

Fig. 4 is a fragmentary sectional view of a modification of the manner of mounting the hand-hold means employed with the device shown in Fig. 1.

Fig. 5 is a fragmentary sectional view of a different hand-hold means.

In Fig. 1 a swimming aid device generally indicated at 10 embodying this invention may comprise a generally spherical floatable object or ball 11 and a pair of diametrically opposed hand-hold means 12. The hand-hold means 12 are removably secured to ball 11 by side mounting plates or discs 13 held against the ball by lashing means 14 laced between the plates and over the ball.

The floatable ball 11 may be made of suitable rubber, synthetic rubber, plastic, other materials impervious to air, or other floatable compositions having sufficient buoyancy in the water either alone or when inflated to support an adult. The outer surface of the ball is preferably smooth, continuous and imperforate. Different buoyancies may be obtained by employing balls of different diameter. A suitable floatable ball may be a well-known type of beach ball or sport ball. While a ball is illustrated, it is understood that this invention contemplates other suitable spheroidal, ovoidal or similar shapes.

The hand-hold means 12 includes the pair of diametri-

cally opposed circular side mounting plates 13, each plate having a concave inner surface 15 of virtually the same radius as the radius of the ball upon which the plates are to be mounted. The outer circumference of each plate may be made relatively small in comparison to the size of the ball upon which it is to be mounted in order that the curvature of the concave face 15 may be more readily adapted to balls of different size. The concave inner face 15 should be large enough to provide sufficient bearing area against the opposed surface portions of the ball so that the mounting plates when laced together will be firmly and immovably positioned. It should be noted that the mounting plates 13 cover and are positioned against diametrically opposite spherical sectors of the ball and that circular edge margins of the plates are substantially spaced apart and expose a relatively large central spherical zone of the ball.

The plates 13 may be made of any suitable material such as a molded plastic material, lightweight metal or other corrosion-resistant material having desired rigidity. Each plate 13 may be provided with a centrally formed, outwardly extending hollow hub portion 16 to receive and connect a handle 17 to the plate, the method of connection being later described. The outer circumferential margins of each plate 13 include a plurality of circumferentially spaced, outwardly pressed or stamped eyelets 18, said eyelets affording a means for threading lashing means 14 therethrough.

The lashing means 14 may comprise any suitable water-resistant, water proof, virtually nonstretchable, flexible cord or rope of suitable diameter or gauge so as to be readily threaded through the eyelets 18. The eyelets on the oppositely disposed plates 13 may be alternately positioned as shown in Fig. 1 to facilitate threading and to uniformly hold plates 13 against the smooth surface of the ball. The lacing of the eyelets by the lashing means 14 in effect forms a net which encases and securely holds the ball and hand-hold means in unchangeable relation.

Each handle 17 may be formed of suitable material such as lightweight wood, plastic or rubber compositions. Each handle 17 includes an outer elongated portion smoothly shaped to afford a convenient grip for the hand. Each handle 17 is provided with a collar 20 adjacent one end thereof and an inwardly extending portion 21 (Fig. 3) adapted to be received and secured within hub portion 16. The collar 20 seats and bears against the opposed edge face of the portion 16.

In a preferred embodiment shown in Fig. 3, the handle 17, collar 20 and inwardly extending portion 21 are integrally formed as one solid piece by molding of a suitable resilient rubber composition. The outermost diameter of the handle and the collar may be virtually the same and slightly greater than the inner diameter of the hub 16. In assembly, the handle and collar are pushed through the hub portion from the inside, the resiliency of the material of the handle permitting contraction thereof for squeezing through the hub portion. When the collar clears the outer edge of the hub portion, it expands outwardly and the handle is securely held against axial movement by the collar and the solid outwardly flared inner portion 21.

The integral resilient handle 17 is provided with a slightly smaller cross section adjacent the collar affording some flexibility in the handle. Application of force to the handle causes slight bending thereof and the relative positions of the mounting plate and ball are not normally disturbed. Unequal strain on the lashing which would cause loosening thereof is thus avoided.

Assembly of the swimming aid device of this invention with the hand-hold means shown in Fig. 3 may be readily accomplished by first partially inflating a ball 11 and then placing the hand-hold means 12 in diametrically opposite positions on said ball. The lashing means 14 may then be threaded through the alternately arranged eyelets of the mounting plates and secured as by any

well-known form of knot. Upon further inflation of the ball, expansion of the ball will draw the lashing means tight and the inwardly extending portion 21 will be clamped tightly between the ball surface and the mounting plate 13. It is understood of course that the ball may be first inflated to its ultimate size and the hand-hold means then secured as by drawing the lashing means 14 tight.

Fig. 4 shows another arrangement for connecting a handle 17' to the plate 13. The inwardly extending portion 21' includes a normally partially outwardly flaring, hollow, resilient flexible tube having a closed end wall 22'. A screw 23' extends through end wall 22' and into the handle 17' for securing the tube against the end face of collar 20'. The open end of the tube, when pressed against the spherical surface of the ball, expands into enlarged, outwardly flaring circular margins which are adapted to be clamped and tightly pressed between the surface of the ball and the annular portion of the mounting plate adjacent to the hub portion 16'. It is understood that the handle and inwardly extending tubular portion may be integrally formed of suitable resilient material if so desired.

In Fig. 5, a different modification of the manner of connecting hand-hold means 12 to a ball 11 is shown. Here, the inwardly extending portion 21'' of the handle includes a hollow, open-ended resilient sleeve 24 of relatively thick section and a removable flanged washer 25 fitted over the inner open end of the sleeve. A screw 26 extends through the washer, the sleeve and into the opposite end face of the handle 17''. Tightening of the screw presses the resilient sleeve tightly against the annular inner surface of the hub portion 16'' so as to firmly secure the handle to the mounting plate. The mounting plates with handles attached thereto may then be oppositely positioned upon a ball and secured thereon by the lashing means 14 as above described.

When used for swimming instruction, it will be readily apparent that the hands of the trainee may readily grasp the hand-hold means 12 in a normal spaced relation. The center of buoyancy of the floatable ball 11 lies in a plane which passes through the diameter of the ball upon which the hand-hold means are mounted and aligned. Thus, the center of buoyancy will always lie between the hands of the swimming trainee and will afford support for the head and shoulders of the swimming trainee in a manner similar to that of the side of the swimming pool. However, the swimming aid device 10 offers only slight resistance to forward movement of the swimming trainee so that the swimming trainee can readily gauge the effectiveness of his swimming leg movements. There is thus provided an effective swimming aid device.

It should be also noted that the swimming aid device of this invention may be used in other swimming activities. For example, the swimming aid device may be readily thrown out into the water because of the hand-hold means and then regained by swimming. In addition, with practice, a swimmer may balance himself in standing position on the swimming aid device by placing his feet on the hand-hold means. Various other uses of the swimming aid device may be made, depending upon the ingenuity of the swimmer.

The swimming aid device also has life-saving features in that it may be readily thrown for quite a distance out into the water to a drowning swimmer, may be readily grasped, and is sufficiently buoyant to support the swimmer.

All changes and modifications in the swimming aid device described above coming within the scope of the appended claims are embraced thereby.

I claim:

1. A swimming aid device comprising, in combination: an inflatable buoyant ball having a continuous uninterrupted external covering; hand-hold means at opposite sides of said ball; and means for securing said hand-hold

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means to said ball comprising a pair of concave convex circular mounting plates positioned over diametrically opposed relatively small spherical sectors of the ball and having edge margins spaced apart and exposing therebetween a relatively large spherical zone of the ball, a central outwardly extending ported hub on each mounting plate, said hand-hold means including a handle member received within each ported hub and each handle member having a resilient outwardly flared inner portion held under compression between the plate and the ball, spaced eyelet means provided on edge margins of said plates, and lacing means extending across said spherical zone and threaded through said eyelet means for interconnecting edge margins of said plates whereby said plates are drawn tightly against said ball and said handle members tightly secured in said mounting plates.

2. A swimming aid device comprising, in combination: an inflatable buoyant ball having an uninterrupted outer covering; hand-hold means at opposite sides of said ball; and means to secure said hand-hold means to said ball comprising a pair of mounting plates each provided with a concave surface virtually complementary to the spherical curvature of said ball when inflated and positioned over opposite spherical sectors of said ball, said plates having edge margins spaced apart a substantial distance, a ported hub on each mounting plate, said hand-hold means including a handle member received within said ported hub and having a resilient outwardly flaring inner portion compressed between the plate and the ball, and lacing means extending between the mounting plates and interconnecting edge margins thereof for compressing the ball between said plates.

3. A swimming aid device comprising, in combination: a floatable object having an external uninterrupted surface; handle members at opposite sides of said objects; means for securing said handle member to said object including a mounting plate for each handle member

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having an inwardly directed concave face virtually complementary to the opposed face of said object and an outwardly extending ported hub portion; said handle member being received within said hub portion and having an enlarged outwardly flaring inner portion compressed between said plate and said object; and lacing means interconnecting said mounting plates and extending around said object whereby said mounting plates and handle members carried thereby are securely attached to said object.

4. A swimming aid device including in combination: a floatable ball; a pair of circular mounting plates each having a concave inner surface corresponding to the spherical curvature of the ball and adapted to be positioned against a spherical sector of the ball, said mounting plate being provided with a circular edge margin and a plurality of spaced stamped-out eyelets in said margin, a central ported hub provided on each mounting plate, a handle member having an end portion received within said hub, said handle end portion including a collar adapted to seat against said hub and an outwardly flared inner portion adapted to seat against an annular portion of said concave surface encircling said ported hub, and lacing means interconnecting and threaded through said eyelet means.

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