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DIVING AND SWIMMING AID

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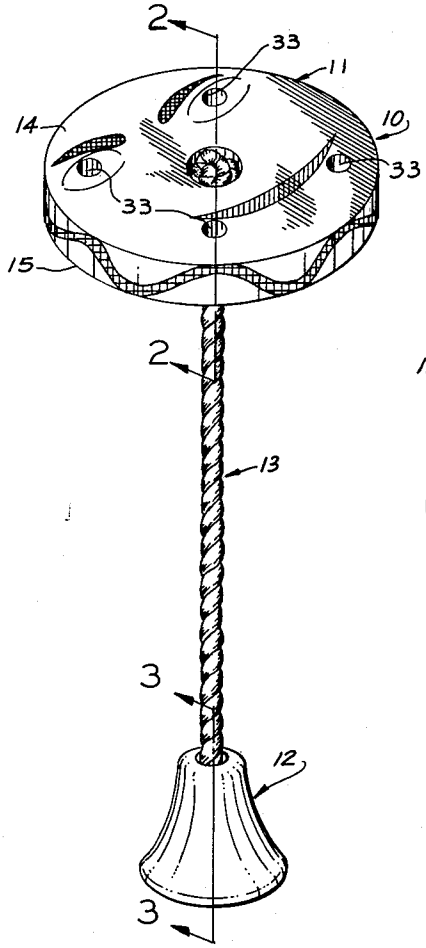


FIG 1

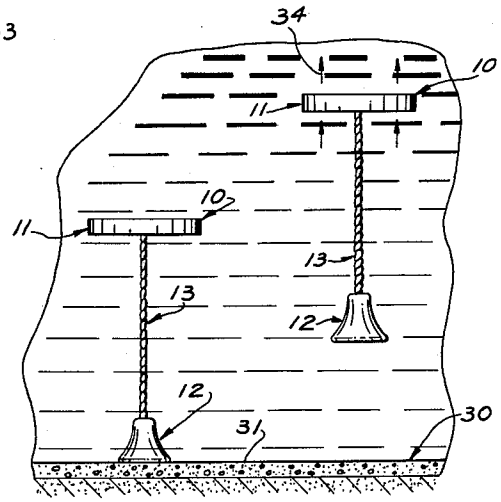


FIG 4

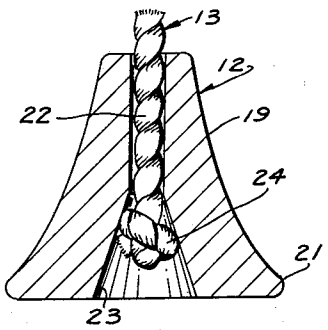


FIG. 3

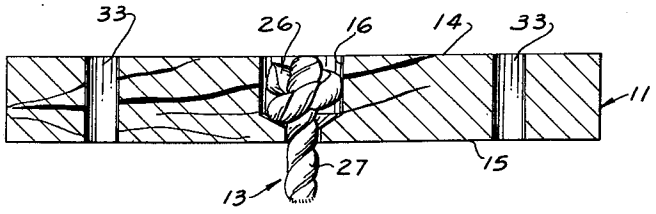


FIG. 2

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DIVING AND SWIMMING AID

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This invention relates to a diving and swimming aid and more particularly to a buoyant member suspendable while anchored in a body of fluid, such as water, for use in aiding swimmers, particularly children, to learn more quickly how to swim and dive, by providing an amusement device for retrieving during underwater swimming and diving, the device being further useful as an amusement device, a decoration for the body of water such as a swimming pool, or as a safety device.

The device comprises a body of buoyant material anchored to a ballast so that when immersed in the water of a pool, or the like, the buoyant body is suspended in submerged, spaced relationship to the ballast having a predetermined weight preferably relative to the size and strength of the swimmer.

In use as a swimming aid, the device is tossed or deposited in the swimming pool whereby the ballast, of relatively heavy weight, causes the device to descend to the floor of the pool. Means are provided for controlling the rate of descent of the device.

The human may be started to dive and swim under water at a fairly early age. It has been found that a child ranging from 18 months to 24 months may learn to swim underwater sufficiently to pick or retrieve one of the devices at the shallow end of a pool. Gradually, the device is retrieved from deeper water and when the child is three years old he may be capable of retrieving two or three flowers at the same time. This helps to make him strong and agile under water as he has to sit on the bottom of the pool twisting and manipulating his body so as to be able to pick up the device. It has been further noted that, at the age of four, the child is capable of picking up to six or seven of the devices weighing approximately one pound apiece and if he continues, progresses until, at the age of six or seven, he can pick up about thirty of the articles during one dive. Carrying such a load to the surface demands strength, endurance and determination. The device has been found to be an advantageous asset in teaching underwater skills to small children and also to adults. The amusement value of the device inspires the children to exert themselves by accomplishment and competition.

Furthermore, the pulling of the weight of the device underwater is very important in preliminary training for lifesaving procedures. Further advantages in this method of training are the confidence and self-discipline the children acquire.

The device may further be used as markers for underwater distance swimming in a pool or merely as an amusement device for competition between swimmers. As a marker, it may be used as a safety device to indicate limits or deep water.

The device of this character is also useful for decoration of a pool in which several of the articles may be scattered about the bottom of the pool, each having a different and decorative configuration. As for example, the buoyant member of the device may be configurated to simulate flowers, such as water lilies, or the like.

It is therefore an object of this invention to provide a new and improved diving and swimming aid having a buoyant body suspendable in a body of fluid, such as water in a swimming pool, spaced in predetermined relationship to a ballast anchored thereto.

Another object of the invention is to provide a new

and improved swimming and diving aid having means for controlling the descent thereof through the body of water.

A further object of the invention is to provide a new and improved diving and swimming aid of the character described which is easily and readily gripped by the swimmer during retrieval thereof.

A still further object of this invention is to provide a new and improved aid which is useful for amusement and athletic activities while being useful for use as decoration or a safety indicator for a swimming pool.

Yet another object of this invention is to provide a new and improved swimming and diving aid in which the component buoyant body and ballast thereof are slidable along the length of a cord securing the components together for improved packaging and handling and storing thereof.

An object of this invention is to provide a new and improved diving and swimming aid which is economical to manufacture and capable of mass production.

A general object of this invention is to provide a new and improved diving and swimming aid of the character described which overcomes disadvantages of prior means and methods heretofore intended to accomplish generally similar purposes.

These and other objects of this invention will be more apparent from the following detailed description, drawing and appended claims.

In the drawings: FIGURE 1 is a perspective view in elevation of the device of this invention;

FIGURE 2 is an enlarged, fragmentary, vertical cross-sectional view as taken substantially along the line 2—2 of FIGURE 1;

FIGURE 3 is an enlarged, fragmentary, vertical cross-sectional view as taken substantially along the line 3—3 of FIGURE 1; and

FIGURE 4 is a fragmentary, vertical cross-sectional view illustrating the adaptation of the instant invention to a body of water such as a swimming pool and the like.

Referring in detail to the drawings, there is shown by way of illustration, but not of limitation, a diving and swimming aid designed and constructed in accordance with this invention and generally referred to by the number **10**. The device **10** comprises a buoyant body **11**, a ballast means **12** and a cord means **13** connecting the buoyant body **11** to the ballast means **12**.

The body **11** may have any desired configuration and is herein illustrated as being circular and having an upper side **14** and an under side **15** and a hole **16** extending centrally therethrough. The body **11** is preferably made of a buoyant material such as wood, cork, styrofoam plastic, or the like so as to have a specific gravity less than the specific gravity of water and float on the water or be suspended therein when anchored by the ballast **12**, as will be hereinafter described.

The ballast means **12** is preferaby made of a relatively heavy material, such as metal or the like, having a frusto-conical configuration referred to by the numeral **19** and an enlarged base **21**. An opening **22** extends centrally through the ballast means **12**, the opening **22** having an enlarged portion **23**. The ballast means **12** is preferably formed of a non-corrosive metallic material so as to prevent corrosion which may result in discoloring of the pool floor. If desired, the ballast **12** may be coated with a non-corrosive material such as paint or plastics.

The cord means **13** is preferably formed of a relatively short length of flexible or pliant material, such as plastics, or the like, and has a pair of opposite enlarged ends **24** and **26** which may be advantageously formed by knotting of the ends. The cord **13** extends through the central hole **16** of the buoyant body **11**, more par-

ticularly through a reduced portion 27 thereof, so that the enlarged end 26 resides within the enlarged portion of the central hole 16 to resist removal of the body 11 from the end having the knots 26. The enlarged portion, or counterbore, of the body provides a recess in which the knot 26 may reside to produce a flush surface on the top 14 of the body 11.

The opposite end of the cord 13 extends through the central opening 22 of the ballast means 12 with the enlarged end or knot 24 thereof residing in the enlarged portion 23 of the opening 22 to prevent removal of the ballast means from the other end of the cord. In this manner, the buoyant body 11 and the ballast means 12 are slidable relative to the cord means 13 to facilitate packing, handling and shipping thereof. The cord 13 may be twisted as illustrated or of smooth, cylindrical configuration if desired and the cord is preferably flexible and/or pliant for a purpose to be hereinafter described. The cord is preferably of relatively short length, such as approximately 10–12 inches long, so as to be safely handled and avoid entangling during use.

In use, the device 10 is merely deposited or tossed into a pool, designated by the numeral 30, so that the device descends to the bottom 31 of the pool by virtue of the gravitational force of the ballast means 12. The body 11, being buoyant, is thereby suspended in the water of the pool in spaced relationship to the ballast means 12. The device 10 may then be retrieved by an underwater swimmer who may pass his fingers under the body 11 or grip the cord 13. The user may spread his fingers to engage the cord therebetween to assist in gripping the underside of the body 11 when grasping the member 11 from the underside. The cord 13 is preferably soft, smooth and flexible and/or pliant so as not to injure the swimmer's hand. Further, the cord 13 may be in the form of a pliant strap. Further, if desired, a relatively rigid connector may be used to connect the body to the ballast.

A means is preferably provided for controlling the speed of descent of the device 10 through the body of water to reach the bottom 31 of the pool. A plurality of transverse apertures 33 preferably extend through the body 11, so as to decrease the drag resistance of the body 11 to the water. For example, as indicated by the arrowed line 34 of FIGURE 4, the water may flow through the apertures 33 to decrease drag resistance of the body 11 to the water, as the ballast 12 pulls gravitationally downward on the body.

The upper side 14 of the body 11 is preferably decorated as indicated, for example, by the face in FIGURE 1 or in various patterns such as flowers, or the like, for use as decorations for the pool or for identifying the device in any desired manner. Although the body 11 is illustrated as being cylindrical, it is to be understood that other configurations may be used, such as non-round or petal simulating forms, if desired.

While there is herein shown and described what is conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of this invention which is not to be limited to the details disclosed therein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices.

What is claimed as new and desired to secure by Letters Patent is:

1. A diving and swimming aid comprised of three members, one of said members being a one-piece disc, perforations through the disc substantially parallel to the direction of thickness of the disc, said disc being made of buoyant relatively rigid material, a second of said members comprising a ballast of material which is denser than the disc, and connecting means engaged with the central portion of the disc and fastened in the ballast to couple the ballast and disc together, said flexible means in use being of a length to maintain the disc below the surface of the liquid in which the swimming aid is submerged, the buoyancy of the disc being more than the combined buoyancies of the connecting member and the ballast, said ballast being readily movable by a person, along with the disc and connecting means, through the body of liquid in which the swimming aid may be immersed.

2. The subject matter of claim 1, wherein the connecting means is flexible.

3. The subject matter of claim 1, wherein the connecting means is a cord.

4. A diving and swimming aid comprised of three members, one of said members being a one-piece disc having a central perforation extending transversely through the disc and substantially parallel perforations through the disc spaced from the central perforation, said disc being made of buoyant relatively rigid material, a second of said members comprising a ballast of material which is denser than the disc, and connecting means engaged with the central aperture of the disc and fastened in the ballast to couple the ballast and disc together, said flexible means in use being of a length to maintain the disc below the surface of the liquid in which the swimming aid is submerged, the buoyancy of the disc being more than the combined buoyances of the connecting means and the ballast, said ballast being readily movable by a person, along with the disc and flexible means, through the body of liquid in which the swimming aid is immersed.

5. The subject matter of claim 4, wherein the central aperture in the disc is a cylindrical hole extending from the upper surface downwardly through the disc, the bottom of the hole being of reduced diameter, and the upper end of the cord is knotted, with the knot in the larger portion of the aperture and below the upper surface of the disc.

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