May 31, 1960 C. S. NOSAK 2,938,727

AQUATIC RECREATIONAL DEVICE

Filed Jan. 18, 1957

Fig. 1.

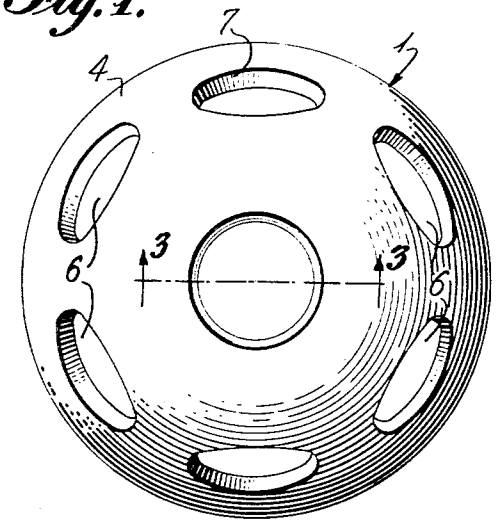


Fig. 2.

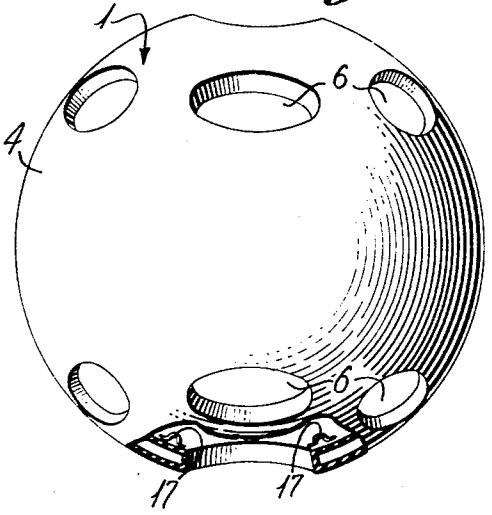
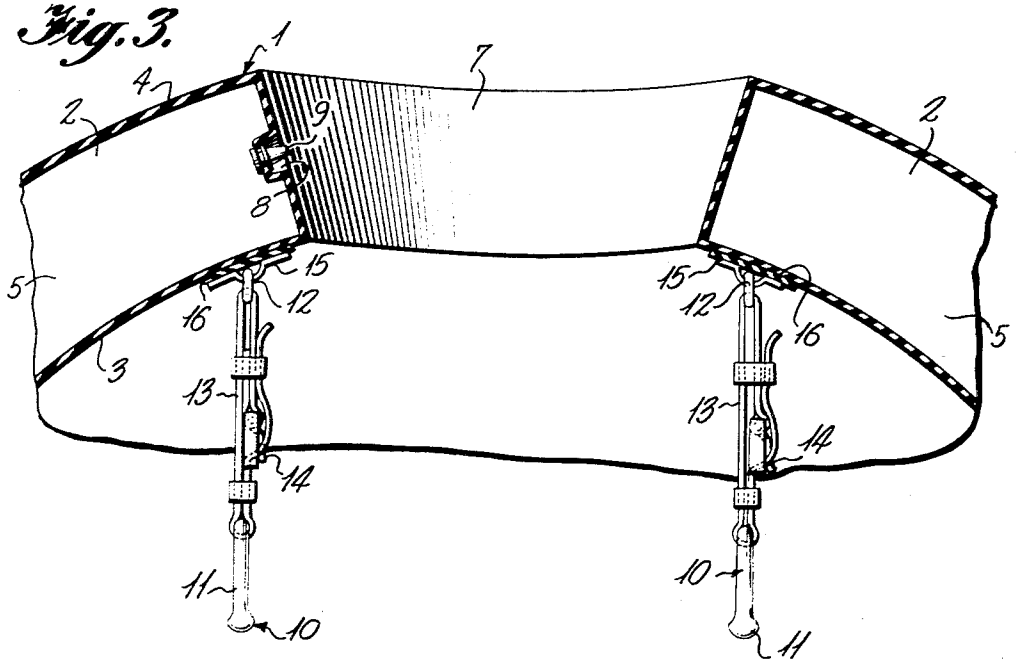


Fig. 3.



INVENTOR

Chester S. Nosak

BY Mason, Fenwick & Lawrence

ATTORNEYS

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AQUATIC RECREATIONAL DEVICE

Chester S. Nosak, 509 Hamlin St., Warwick, Va.

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2 Claims. (Cl. 272—57)

This invention relates to recreational equipment and more particularly to that form of inflatable recreational equipment which may be used in water at beaches and swimming pools for support in the water, play and exercise.

Inflatable rubber or plastic rafts are well-known. These are used principally as platforms from which to dive into the water, and as a support for the body of a user who uses his hands and feet to paddle it about in the water. The user of such equipment must either lie on the raft or straddle it, standing in an upright position being almost impossible due to the action of the water in upsetting the user's balance; and, in models made of light-weight material, a good footing could not be obtained due to the feet of the user sinking into the raft.

The present invention is designed to enable the user to obtain a far greater range of exercise which will develop abdominal muscles as well as muscles of the legs and arms. At the same time, it will furnish a means for entertainment and provide for a wider range of games that may be played by a group.

Consequently, it is an object of the present invention to provide an inflatable hollow-wall recreational device for use in the water at beaches and swimming pools, having the form of a generally spherical cage into which the user may enter and standing upright may propel the device over the water by changing his position in the device in one direction or another to over-balance it.

A still further object of the present invention is to provide such an aquatic recreational device with means by which the user may secure himself within the sphere so that he may roll about on the water head-over-heels.

Other objects of the invention will become apparent from the description of the following practical embodiments of the invention when read in conjunction with the drawings, wherein,

Figure 1 is a plan view of the inflatable hollow-wall recreational sphere of the present invention;

Figure 2 is a side elevational view of the sphere, parts being in section;

Figure 3 is a section taken on the line 3—3 of Figure 1.

Adverting now to the drawings, and particularly to Figures 1 and 2, there is shown an aquatic sphere **1** having a double wall **2**. The wall **2** consists of concentric spheres, one being the inner envelope **3** and the other being the outer skin **4** spaced therefrom to provide an air space **5**. The diameter of the sphere may be varied to accommodate the height of users, three sizes being adequate to accommodate children, women and men. The most likely size would have, for example, a diameter of about 6 feet.

A plurality of ports or entrances **6** are provided about the periphery of the sphere **1**. The size and number of the ports **6** may be varied according to the size of the sphere. In the embodiment shown in Figure 1 there

are fourteen of the ports **6** for a six-foot diameter sphere, and each of the ports is about 20" in diameter.

A liner **7** surrounds each of the ports **6** and connects the inner envelope **3** with the outer skin **4**. The liner **7** is about 6" in width in the embodiment shown in Figure 1.

The inner envelope **3** and the outer skin **4** are made of plastic or rubber and may be reinforced with suitable fabric. Each may be molded in the shape of hemispheres, two hemispheres, not shown, being vulcanized or heat-sealed together to form the inner envelope or the outer skin. Perhaps more conveniently they may be made of pieces of rubber or plastic material cut to the shape of spherical sectors and vulcanized or heat-sealed together to form the inner envelope **3** or the outer skin **4**, in the well-known manner of forming inflatable beach balls. The two spheres may then be connected together by the port liners **7** by sealing the edges of the liners to the inner envelope **3** and outer skin **4**.

A recess **8** is provided in one of the liners **7** and a valve **9**, which is similar to a tire valve, is installed in the recess in communication with the air space **5**. A tire pump may be used for pressurizing the air space **5**. When the device is inflated, it assumes a generally spherical form.

Of course, the elastic material of which the two spheres **3** and **4** are made will bulge inwardly in the case of the inner envelope **3**, and outwardly in the case of the outer skin **4** when the air space **5** is pressurized, so that while the distance between the outer skin **4** and the inner envelope **3** will be 6" at the edge of the ports **7**, they will lie, for example, 8" or 9" apart at the mid-points between the ports when the wall **2** of the sphere **1** is inflated.

A pair of handholds **10** are attached to the inner envelope **3**. The handhold **10** comprises a handgrip **11** and an attachment ring **12** through which an adjustable length strap **13** is passed and fastened with a buckle **14**. The attachment ring **12** is fixed to the inner envelope **3** by means of a strap **15** passed through the attachment ring **12** and vulcanized or heatwelded to the inner envelope **3**. To reinforce the point of attachment, one or more plies of reinforcement material **16** may be secured to the inner envelope and the strap **15** may then be attached to the reinforcement material.

A pair of stirrups **17** are attached to the inner envelope **3** at a point diametrically opposite the handholds **10**. The inner envelope **3** may be reinforced in the same manner as for the handholds.

In use, the spherical aquatic recreational device of this invention may be deflated and packed in a suitable carrying case for transportation. After inflation, the sphere is rolled into the water, and the user enters the interior through one of the openings or ports. Inserting his feet in the stirrups and gripping the handholds which have been adjusted for his height, the user arches his body forwardly or rearwardly to create an imbalance of the sphere to cause it to roll, the user being turned head-over-heels as the sphere revolves. With practice, the user can readily propel the sphere over the water by rhythmically pulling on the handholds and kicking with his feet, the flexibility of the device being advantageous to this maneuver; and by lurching in one direction or another he can change his rotation to that of a spiral.

For the playing of games in the water, the device of the present invention affords an excellent medium for a contest. The players on the outside of the sphere can readily grip the sphere at the ports or openings, to facilitate propelling it toward a goal line.

While in the above description there has been disclosed practical embodiments of the invention, it will be under-

stood that the invention may include other structural forms.

What is claimed is:

1. An inflatable aquatic recreational device comprising inner and outer concentric spheres of airtight material, each said sphere having a plurality of ports registering with similar ports in the other said sphere, said spheres being joined together along the edges of said ports to form a sealed air space between said spheres, said spheres defining the wall of a chamber of a size to receive a person when said air space between said spheres is pressurized, and said ports being means through which said person may enter said chamber.

2. In an inflatable aquatic recreational device as claimed in claim 1, a pair of hand holds and a pair of stirrups, said pairs being attached to said inner sphere at diametrically opposite points.

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