# United States Patent [19]

Kaas

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[54] **DEVICE FOR SEPARATING THE LANES IN A SWIMMING POOL FOR SWIMMING RACE**


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[52] **U.S. Cl.** ..... **9/8 R**

[51] **Int. Cl.** ..... **B63b 21/52**

[58] **Field of Search** ... 9/8 P, 8 R; 114/0.5 T; 4/172; 61/5



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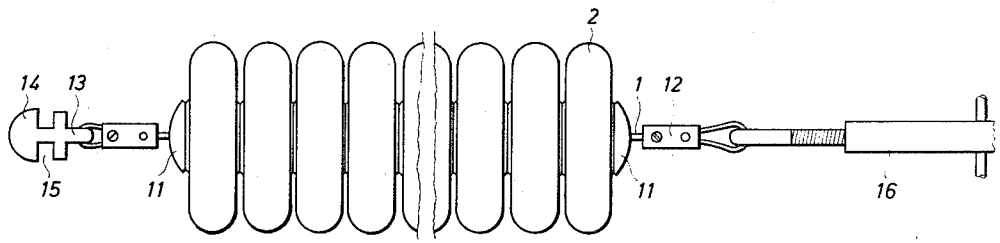
[57] **ABSTRACT**

A device for separating the lanes in a swimming pool for swimming race and comprising a cable carrying floats shaped as solids of revolution having a hub provided with an axial through-going hole for the cable and with a concave spherical support surface at one end and a convex spherical support surface at the opposite end, the middle portion of said hub being connected to a surrounding water breaking peripheral portion having a smaller axial extent than the hub.


**5 Claims, 3 Drawing Figures**



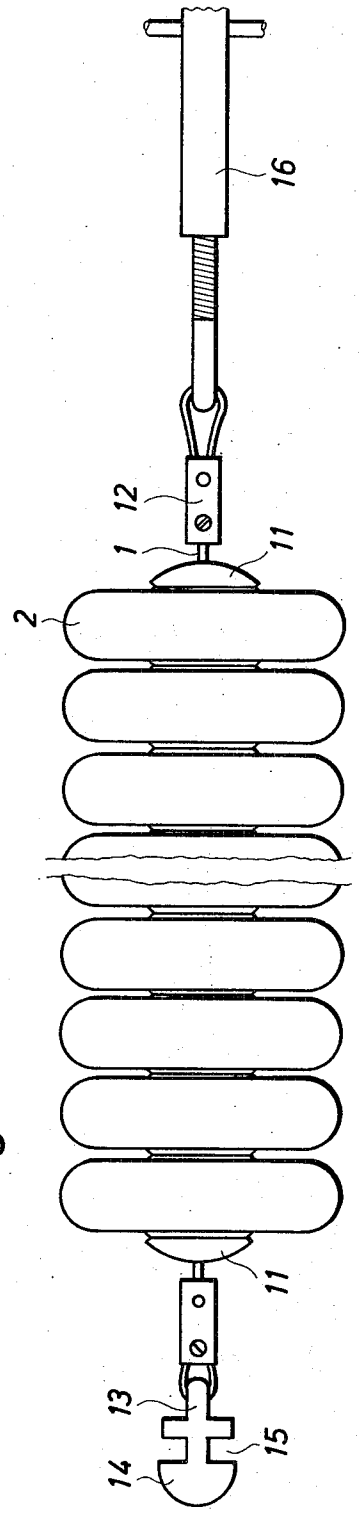



Fig. 1

Fig. 2

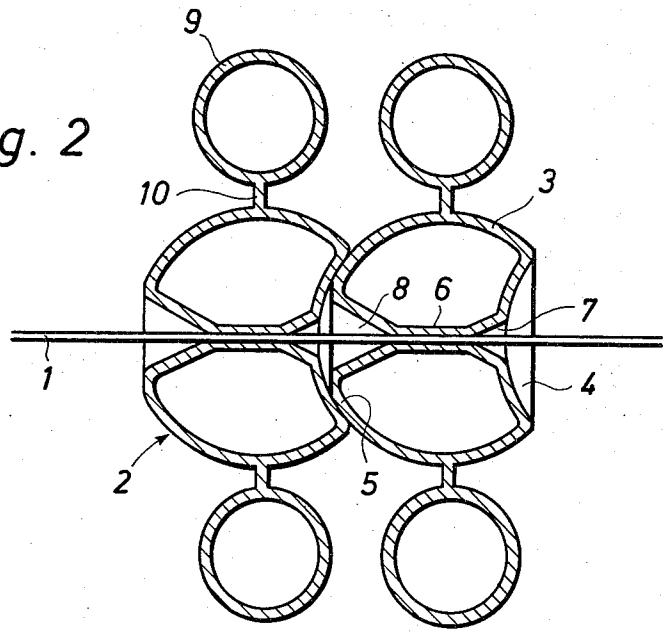
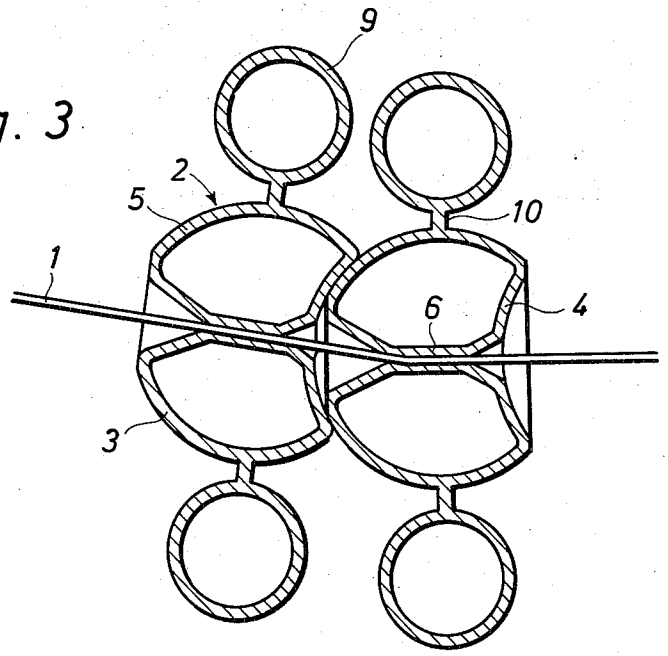



Fig. 3



# DEVICE FOR SEPARATING THE LANES IN A SWIMMING POOL FOR SWIMMING RACE

The invention relates to a device for separating the lanes in a swimming pool for swimming race and comprising a plurality of floats carried by a through-going cable.

During the swimming race the swimming pools are usually divided into lanes separated by cables carried by mutually spaced floats. However, by such simple separation of the individual lanes it is a disadvantage that the waves produced by a swimmer in one lane are propagated to the adjacent lanes disturbing the swimmers in these.

It is the object of the present invention to provide a lightweight flexible cable for separating lanes, which cable is breaking the waves in such a manner that the above-mentioned disadvantage is avoided.

According to the invention is is obtained by a device comprising floats formed as bodies of revolution having a hub provided with an axial through-going hole for the cable and with a concave spherical support surface at one end and a convex spherical support surface at the other end, the middle portion o said hub being connected to a surrounding wave-breaking peripheral portion having a smaller extend in the axial direction than said hub.

Owing to the spherical support surfaces the floats, which are arranged closely side by side, are mutually pivotable in such a manner that they are forming a flexible bar, which, however, has retained its cable-like characteristics and consequently is easy to handle and the wave-shaped peripheral portions combined with the through-going bar formed by the hubs bring about that the waves produced by the swimmers preclude that the waves can be propagated to the adjacent lanes or under all circumstances they are dampened considerably in the small channels formed between the bodies.

According to the invention the mutual flexibility between the separate floats and the flexibility of the cable as a whole is considerably increased when the through-going holes for the cable at their ends are provided with funnel-shaped or conical mouth portions.

The short extend of the peripheral portions in the axial direction allows a substantial bending of the cable before the peripheral portions are abutting each other and according to the invention said portions may suitably be tore-shaped, whereby their influence on the waves are the same whatever the direction of the waves towards the cable may be.

The device can be produced with a relatively small weight for instance the floats may be made of plast material and may have a hollow hub and/or peripheral portion.

According to the invention the whole row of floats may be held together by the uttermost floats being abutting correspondingly domed metal-discs the outer surfaces of which are limited by retaining members serving to secure the cable to lock-bolts, each of said bolts being provided with a head being so formed and connected to the remaining portion of the bolt that it can be inserted through a key hole-shaped opening in a furnishing on the end-wall of the swimming pool and can be retained therein. By these last-mentioned arrangements the cable can easily be mounted and demounted.

FIG. 1 shows an embodiment of the inventive device;



FIG. 2 is an axial view through two abutting floats, and

FIG. 3 a view corresponding to that of FIG. 2, but with the floats being slightly pivoted relative to one another in such a manner that they no longer are coaxial.

As it appears from FIG. 1 the inventive device comprises a cable 1 upon which is suspended a rope of closely arranged floats 2 formed as bodies of revolution and moreover, being shaped as best seen in FIGS. 2 and 3. It appears that each float has a substantially sperical, hollow hub 3, which at their ends are provided with spherical support surfaces i.e. at one end with a conical support surface 4 and at the other end with a convex support surface 5. The cable 1 is passed through a through-going axial hole 6 in each float 2, which holes at their ends are funnel-shaped entlarged portions 7 and 8 which are increasing the ability of the floats to turn in axial planes. Further it will be seen that the floats are free to rotate in radial planes about the cable 1 overcoming the friction between the support surfaces so that they can rotate when influenced by the waves and at the same time as they are exposed to a braking and wave-dampening or wave-calming force.

The arriving waves are broken against a hollow peripheral portion 9 which is connected to the middle portion of the hub 2 through a flat annular portion 10. It will be seen that the peripheral portion 9 has a smaller extent in the axial direction than the hub 2 so that they are no hinderance to the bending of the cable such as appears from FIG. 3.

The waves are forced through the channels through the floats in which they are divided and dampened.

At the end of the cable the uttermost floats 2 are abutting correspondingly domed metal-discs 11, the displacement of which towards the end of the cable are limited by retaining members 12. To the left of the figure the retaining member 12 is securing the cable to a lock-bolt 13 provided with a head 14 which can be inserted in a key hole-shaped opening in a mounting (not shown) in the end-wall of the swimming pool and can be retained therein as the edges of the narrow portion of the key hole are engaging the grooves 15 in the lock-bolt. Between the retaining member 12 at the right end of the cable in FIG. 1 and a lock-bolt 13 not shown is inserted a turnbuckle 16.

It will be obvious to those skilled in the art that various changes of the floats may be made which will fall within the scope of the following claims. For instance the floats need not be hollow plastic bodies, but they can be solid bodies made of a material with a small specific weight.

I claim:

1. A device for separating the lanes in a swimming pool for swimming race and comprising a plurality of floats being suspended from a through-going cable, characterized in said floats being bodies of revolution provided with a substantially spherical hub having an axially through-going hole for the cable and a concave spherical support surface at one end and a convex spherical support surface at the other end, said hub at its middle portion being connected to a surrounding wave-breaking peripheral portion the axial extent of which is less than that of the hub, said peripheral portion being tore-shaped and being connected to said hub through a flat annular portion.

2. A device as defined in claim 1, characterized in said through-going hole at its ends being provided with funnel-shaped or conical, widened mouth portions.

3. A device as defined in claim 1, and comprising floats of plastic material characterized in said hub being hollow.

4. A device as defined in claim 1, characterized in that the uttermost floats are abutting correspondingly dome-shaped metal-discs the outer surfaces of which border on retaining members by which the cable is secured to lock-bolts, each of said lock-bolts having a head being so shaped and connected to the remaining part of the respective lock-bolt that it can be inserted through and retained in a key hole-shaped opening in a mounting on the end-wall of the swimming pool.



5. A device as defined in claim 1, and comprising floats of plastic material characterized in said peripheral portion being hollow.

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