May 27, 1924. 1,495,201

M. RADO

MECHANICAL SWIMMING DEVICE

Filed Aug. 26 1922 2 Sheets-Sheet 1

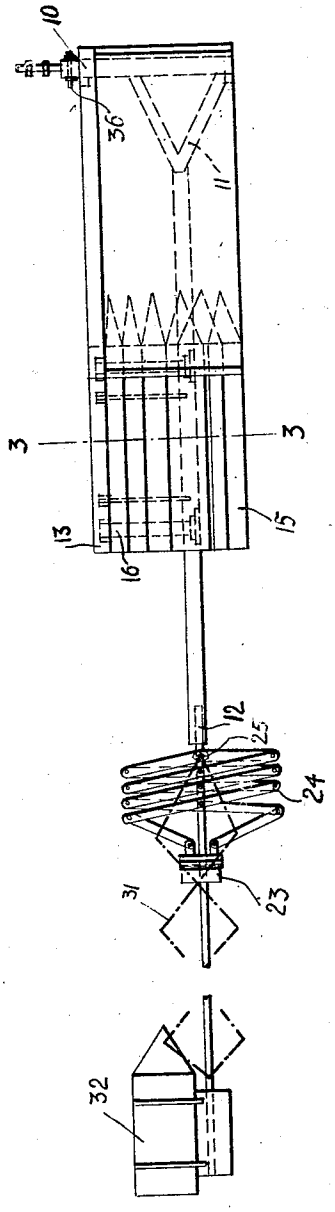


Fig. 1.

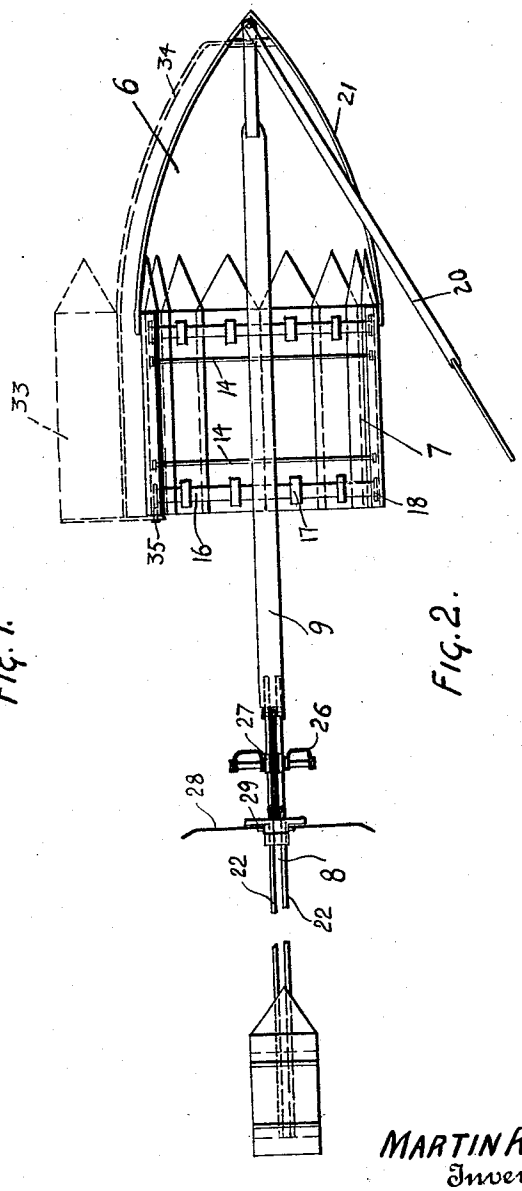


Fig. 2.

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By his Attorney Julius J. Wittal

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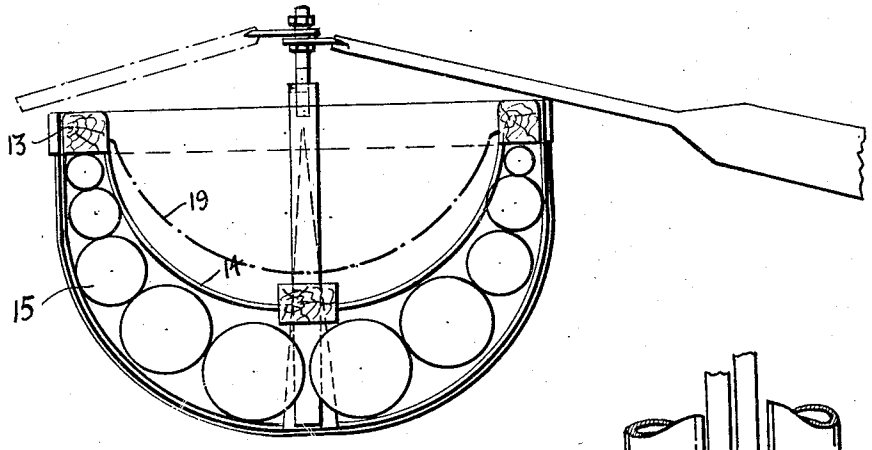


Fig. 3.

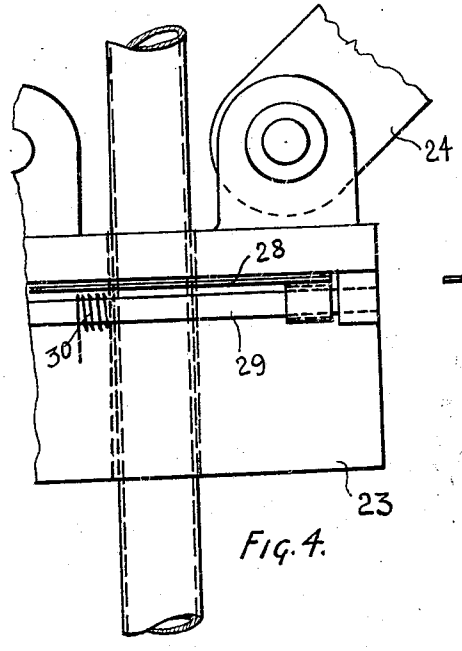


Fig. 4.

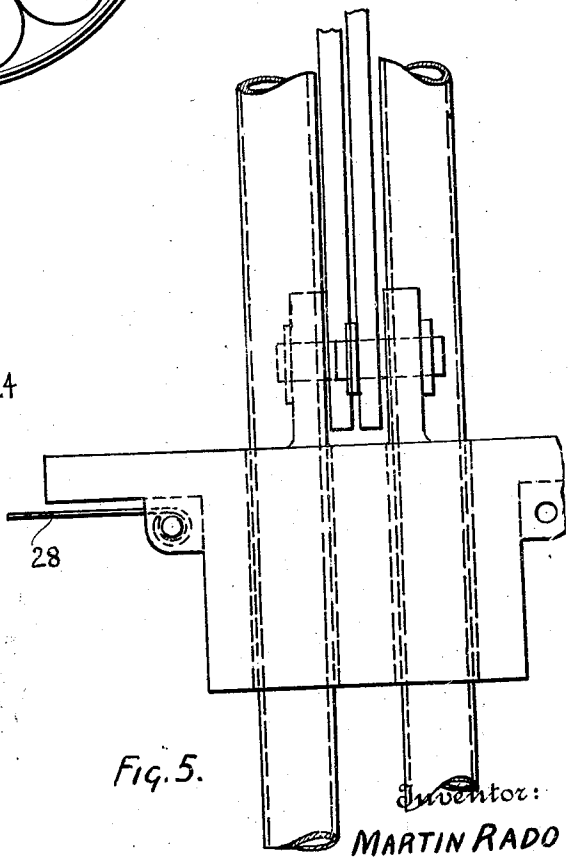


Fig. 5.

Inventor:
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By his Attorney Julian J. Wittal

Patented May 27, 1924. 1,495,201

UNITED STATES PATENT OFFICE.

MARTIN RADO, OF NEW YORK, N. Y.

MECHANICAL SWIMMING DEVICE.

Application filed August 26, 1922. Serial No. 584,463.

To all whom it may concern:

Be it known that I, MARTIN RADO, a citizen of Hungary, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Mechanical Swimming Devices, of which the following is a specification.

This invention relates to sporting devices and has for its object to provide a mechanism which will greatly increase the speed and the endurance of its user while swimming.

Another object of the invention is to provide a device of the mentioned character which will resemble a boat floating on the water and which will insure the most comfortable position to its user. Still further objects of my invention are to provide such a swimming bed which can be adjusted to different positions of the swimmer, which is safe in use, practical in construction and cheap to manufacture.

To obtain the mentioned objects, I provide a bedlike floating structure with a front part shaped similar to that of a boat and equipped with a mechanism whereby the person using the same and lying in said structure can operate oars both with his hands and legs, and thereby propel said structure on the surface of the water with a great speed.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the same for effecting the various results mentioned hereinbefore, reference is to be had to the following description and accompanying drawings, forming part of this specification.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of my invention is illustrated in the accompanying drawings, in which:—

Fig. 1 is an elevational side view of my device, portions of the same being broken away, in order to reduce the length of said view,

Fig. 2 is a plan view of my device, similar to Fig. 1., Fig. 3 is a cross sectional view, the section being taken on the line 3—3 of Fig. 1., while Figs. 4 and 5 are detail views of certain portions of my invention, shown in a larger scale.

Referring more closely to the drawings, the numeral 6 indicates the front portion of my device in general, the numeral 7 the central portion of the same, while the numeral 8 stands for the rear portion of it. The main connecting link between the three portions of my device is a comparatively strong beam 9 which runs throughout the length of the central portion and to which is connected a post 10 at the front part of my device, with a vertical forklike structure 11, while the rear portion 8 is connected to the rear end of said beam as at 12. The central portion of my device has two beams 13 at the sides of the top surface which are interconnected with each other and with the beam 9 by two strong metal bands 14. Cylindrical floats 15 are arranged around said bands 14 and give the whole structure a certain amount of lifting power in the water. The lowest centrally located floats are of large diameters and the floats have gradually diminishing diameters towards the upper portions of the device. Said floats will be held in position by two bands 16, passing through appropriate loops 17, arranged on the floats. The ends 18 of these bands are secured into the beams 13. The central portion of my device is further equipped with the bedlike structure 19, suspended from the beams 13 and made of netting or any other suitable material in such a way as to comfortably receive the upper portion of the body of a man in a downwardly lying position and being adjustable to enable the user to immerse in the water to a larger or smaller extent.

The oars 20 are connected to the vertical post 10 in the front of my device in such a manner as to permit them to execute the different motions necessary for rowing with them.

The front portion also may be covered by plates 21 in a boatlike manner, such plates being preferably made of wood, aluminum or other materials of light weight. The user of my device will float the same on the water and will lie downwardly on the suspended bed 19 in the central portion of the same. In such a position he will be able to reach the oars with his hands and row forwardly through the use of said oars.

My device, however, will also permit the user to propel the same with his legs. For this purpose, I employ the rear portion 8 of my device. Said rear portion mainly

consists of two preferably round guide bars 22, arranged side by side and horizontally in the center line of the beam 9, being secured thereto as at 12. A sliding guide piece 23 runs on the horizontal bars 22 and is connected to a multiple scissorlike hinged link structure 24, arranged between said two guide bars 22. The starting links of the same are permanently secured to said guide bars, as at 25. A pedal device 26 is secured to the two sides of said multiple link structure 24, having two sliding guides 27 arranged on the guide bars 22. Two vertical rowing planes 28 are hingedly connected to the two sides of the sliding guide piece 23 in such a manner that when going forward in the direction of the front of my device, the resistance of the water will force them to fold down flat alongside the guide bars 22 so that said guide piece 23 and planes 28 will move forwardly in the water meeting a very slight resistance only, while when the guide piece 23 is forced backwardly towards the rear end of my device, the planes 28 will open up under the action of spiral springs 30 arranged on their shafts 29, and will encounter a great resistance in the water, thereby powerfully driving my device in a forward direction. This backward driving and forward pulling of said planes 28 will be executed by the motions of the legs of the swimmer making use of the pedals 26. The swimmer, while lying flat on the central portion of my device and propelling the same forwardly with oars 20, will secure his feet into the pedals 26 and pull them forwardly and push them to the rear alternately on the guide bars 22. In order to greatly increase the propelling power of the leg movements of the swimmer, I have interposed the multiple link construction 24 between the pedals 26 and the sliding piece 23, carrying the planes 28. At a comparatively small rearward motion of the legs of the swimmer, that is of the pedals 26, said link structure is forced to open up to a considerable length, as shown by the dotted lines 31, thereby multiplying the length of the stroke of the swimmer's legs, and forcing the planes 28 through a considerable distance in the water. The movements of the planes 28, combined with the rowing effect of the arms of the swimmer, will give a surprisingly high speed to my swimming device.

At the rear end of my device, I may employ a float 32 to keep the same in a level position, while additional floats 33 may be employed at the sides of the center part of my device to protect the same in very rough water, or in cases where it may have a temporarily eccentric loading. These additional floats 33 may be turned upwardly on their frame structures 34 and on pins 35 out of contact with the water in case their use is not needed and a greater velocity is aimed at or it is desired to reduce the width of the swimming device.

Having thus described my invention, what I claim as new and want to protect by Letters Patent of the United States, is:—

1. A sporting device for swimmers, comprising a central structure, arranged on floats and having a boatlike front portion and general contour, bedlike means attached to said structure and adapted to receive the upper body of the user of said device in a lying position, two independent oars secured to the front portion of said structure and adapted to propel and govern said structure therewith; a horizontally extending rear portion to said structure having a float at its rear end; vertical and foldable rowing planes slidably arranged on said rear portion, a link mechanism connecting said rowing planes and said extension and pedals for the legs of the swimmer secured to said link mechanism.

2. A sporting device for swimmers, comprising a central structure, arranged on floats and having a boatlike front portion and general contour, bedlike means attached to said structure and adapted to receive the upper body of the user of said device in a lying position, a vertical post secured to the boatlike front portion of said structure and carrying oars adapted to be operated by the hands of the user, horizontally extending guiding means secured to the rear end of said structure, said guiding means carrying a sliding mechanism and having rowing planes attached thereto adapted to fold down on said guiding means in a longitudinal direction on the forward movement of said sliding mechanism, and to open up in a perpendicular or transverse direction on the backward movement of said guiding mechanism, a scissorlike hinged link structure interposed between said sliding mechanism and the rear end of said floating structure, pedals attached to said link structure and adapted to be operated by the legs of the user of said sporting device, and additional float bodies arranged on the sides of said floating structure and adapted to be turned out of engagement with the water.

Signed at New York, in the county of New York and State of New York, this 19th day of August, A. D. 1922.

MARTIN RADO.