Sept. 27, 1932. E. BERGER 1,879,726

SWIMMING DEVICE WITH AUTOMATIC GAS FILLING

Filed Dec. 30, 1931

Fig. 1

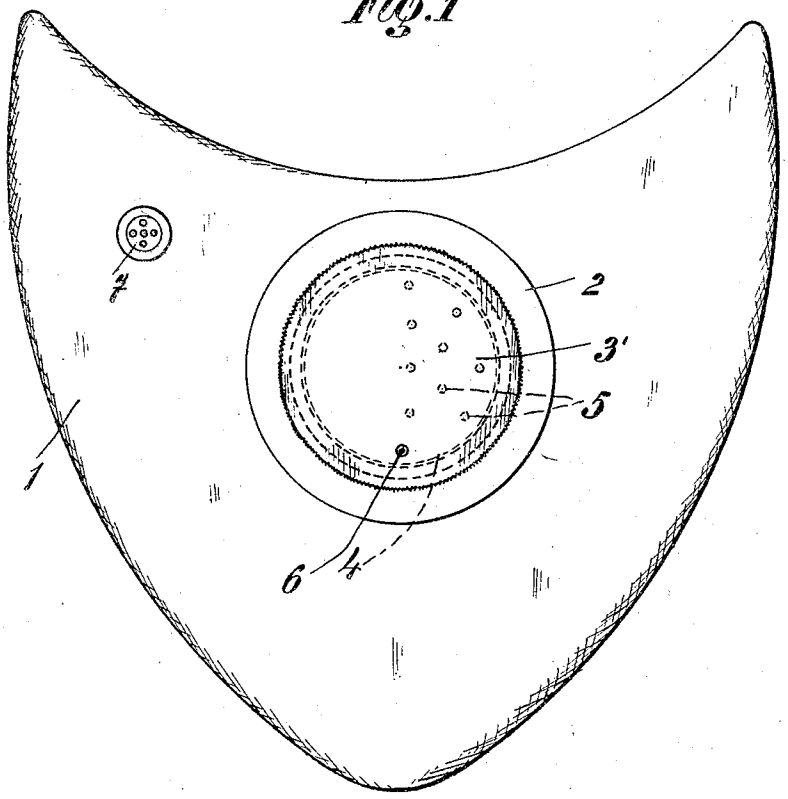
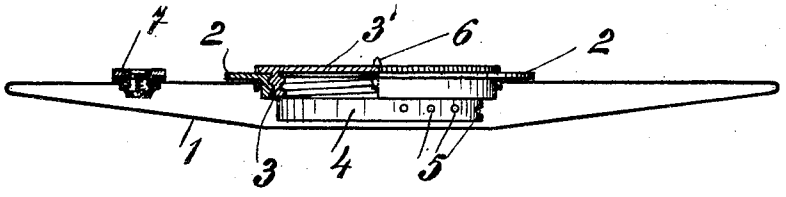


Fig. 2



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UNITED STATES PATENT OFFICE

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SWIMMING DEVICE WITH AUTOMATIC GAS FILLING

Application filed December 30, 1931. Serial No. 583,951.

The commonly used swimming devices serve chiefly as life belts or as a means for facilitating swimming.

The swimming device according to the invention serves for the same purposes but differs essentially from the swimming devices of known construction in that the new device, when coming into contact with the water, is automatically filled with gas and then acts as a swimming device.

An embodiment of the invention is illustrated by way of example in the accompanying drawing, in which:—

Fig. 1 shows the device in top plan view.

Fig. 2 is a cross section on line II—II of Fig. 1.

The swimming device consists of a rubber bag 1, which has in the upper wall an aperture bordered with a closing ring 2 of metal or hard rubber. This ring is internally screw threaded. The aperture is closed by a cap 3 screwed into the ring 2 and having a large top plate designed to bear upon the upper surface of ring 2.

A capsule 4 screwed into the internally threaded flange of cap 3 projects into the rubber bag 1. This capsule 4 is filled with calcium carbide and has holes 5 in one half of its edge and in the bottom plate through which the acetylene gas can freely flow out. In the top plate of cap 3 a nozzle 6 is arranged, through which water can flow into the capsule 4. As soon as gas is generated in the capsule 4, the nozzle 6 is closed from the inner side by means of a rubber packing not shown in the drawing so that the inflow of water is shut off. On the rubber bag a valve 7 of any suitable construction adapted to be regulated is arranged, designed to regulate the gas pressure in the rubber bag. This valve is automatically opened as soon as the gas pressure in the rubber bag 1 exceeds a certain degree so that the gas in excess can escape.

To use the swimming device two such rubber bags are sewn or otherwise attached to a swimming dress, one on each side underneath the arm pit on the inner surface of the swimming dress. As soon as the water rises to the arm pit it flows through the nozzle 6 into the capsule 4 so that acetylene gas is instantaneously generated and the rubber bags are inflated.

I claim:—

1. A swimming device with automatic gas filling, comprising in combination a rubber bag, a capsule filled with calcium carbide in said rubber bag, and means for the admission of water from the outer side into said capsule so that the inflowing water generates acetylene gas from the calcium carbide, the rubber bag being thus inflated.

2. A swimming device as specified in claim 1, comprising in combination with the rubber bag having an aperture and the capsule in the rubber bag, an internally threaded ring of solid material bordering said aperture, a cap screwed into said ring carrying said capsule, and a nozzle in the top plate of said cap serving as water inlet for said capsule.

3. A swimming device as specified in claim 1, comprising in combination with said rubber bag having an aperture and said capsule filled with calcium carbide, an internally threaded ring of solid material bordering the edge of said aperture, a cap screwed into said ring carrying said capsule, a nozzle in the top plate of said cap serving for the admission of water into said capsule, and a shutting off device on the inner end of said nozzle adapted to shut off the water supply as soon as the pressure of the acetylene gas generated in said capsule has risen to a certain degree.

4. A swimming device as specified in claim 1, comprising in combination with said rubber bag having an aperture and said capsule filled with calcium carbide, an internally threaded ring of solid material bordering the edge of said aperture, a cap screwed into said ring carrying said capsule, a nozzle in the top plate of said cap serving for the admission of water into said capsule, a shutting off device on the inner end of said nozzle adapted to shut off the water supply as soon as the pressure of the acetyl gas generated in said capsule has risen to a certain degree, and an automatically acting outlet valve in said rubber bag.

In testimony whereof I affix my signature.

EMIL BERGER.