

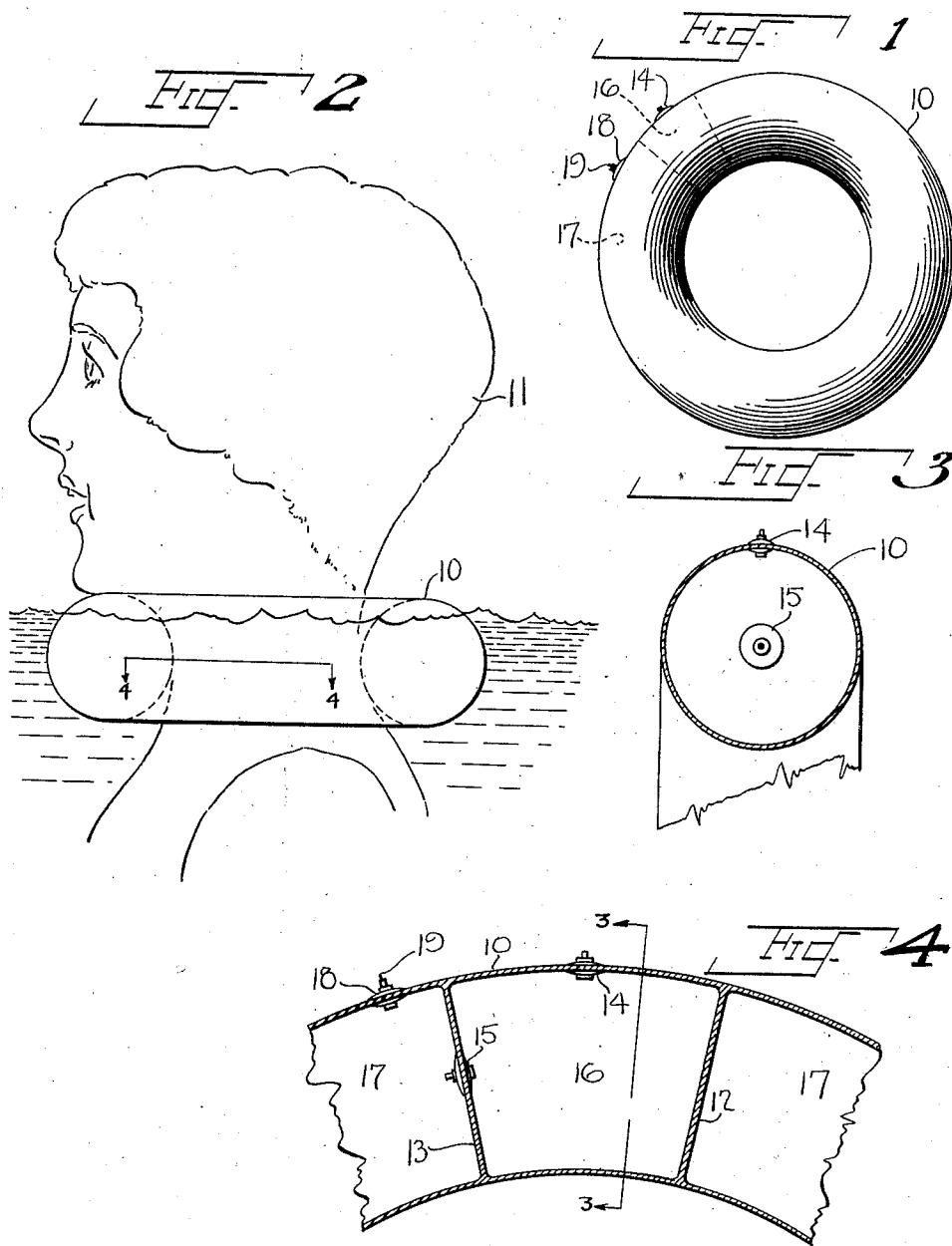
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LIFE PRESERVER

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LIFE PRESERVER.

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This invention relates generally to swimming, and particularly to a special form of life preserver adapted for use by learners and small children.

5 The main object of this invention is to provide an exceedingly simple and efficient form of life preserver which cannot be separated from the wearer without deflating same.

10 The second object is to so construct the life preserver that it can be worn around the neck of the swimmer, thereby insuring the holding of the swimmer's nose and mouth above the surface of the water.

15 The third object in so constructing the life preserver that it may be placed around the wearer's neck is to make it possible to secure the same beneficial results with a preserver having a much less cubical capacity than the type ordinarily worn under the arm pits.

20 The fourth object is to provide a convenient means for inflation and deflation of the preserver without the necessity of employing an outside pump or using the lungs for inflating purposes.

25 These, and other objects, will become more apparent from the specification following as illustrated in the accompanying drawing, in which:

30 Fig. 1 is a plan of the preserver of which Fig. 2 is a side elevation showing same worn around the neck of a child whose head is being held out of the water by the life preserver. Fig. 3 is a transverse section through the tube showing the position of the valves. Fig. 4 is a fragmentary section taken along the line 4—4 in Fig. 2 showing the valves for inflating and deflating the tube.

40 Similar numbers of reference refer to similar parts throughout the several views.

Referring in detail to the drawing, the life preserver is in the form of a toroid 10 similar to the inner tube of a pneumatic tire but small enough to closely encircle the neck of a swimmer whose head 11 only appears above the life preserver, it being necessary to deflate the device before it can be employed or removed from the wearer's head.

50 For the sake of convenience there are placed across the tube two walls 12 and 13, preferably also of resilient material. In the member 10 between the walls 12 and 13 is a check valve 14 which is normally closed, but open when the pressure between the

walls 12 and 13 is less than the outside pressure.

In the wall 13 is a second check valve 15 which permits air to pass from the compartment 16 between the walls 12 and 13 into the compartment 17. A third check valve 18 permits air to pass outwardly from the compartment 17 when the push pin 19 is depressed.

60 Obviously all of these valves could be replaced by a simple valve similar to those used on a pneumatic tire tube, but the arrangement above described is employed for the convenience of the swimmer.

70 The operation of the device is as follows: Assuming that the tube 10 is in a deflated condition the wearer slips same over his head and grasps the section around the compartment 16 with his hand pressing and releasing same alternately, thereby causing air to pass through the valve 15 into the compartment 17 and then refilling the compartment 16 by means of outside air passing through the valve 14. This operation is repeated until the desired degree of inflation is obtained.

80 When it is desired to deflate the tube 10 it is only necessary to press the finger nail on the pin 19.

85 While this device appears to be similar to the ordinary life preserver now in common use it functions in an entirely different manner. In the first place, the greatest leverage which can be applied to the human body tending to hold its head out of the water is, of course, as near as possible to the head. Having its greatest leverage it is obvious that the required buoyancy can be much less, with the result that a smaller and cheaper and more compact device can thus be produced.

90 Again, the position in which the device is worn prevents it from becoming detached from the wearer accidentally or otherwise, which is highly important, since no matter how efficient a life preserver may be it cannot function at all unless it is connected in some way to the needy swimmer.

100 Again, when the ordinary life preserver is used under the arm pits an attempt is made to hold the body higher in the water than is necessary, thereby failing to utilize the full value of the natural buoyancy of the human body, with the result that additional buoyancy must be provided in the life preserver.

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It can therefore be seen that a triple value arises from so positioning the life preserver that it will encircle the neck rather than the body of the wearer.

5 We are aware that many forms of life preservers have been constructed in the past; we therefore do not wish to cover this device broadly, but we do intend to cover such forms and modifications thereof as fall fairly within the appended claims.

10 We claim:

1. A life preserver consisting of a ring-shaped inflatable tube which can pass over the head of a person only when deflated but
15 which cannot be removed therefrom when inflated and having a pair of transverse partitions therein forming a pump compartment between same; an air inlet valve in said

tube opening into said pump compartment; an air outlet valve in one of said partitions opening into the body of the ring; and a second outlet valve in the outside of said ring adapted to permit the deflation of said ring when manually operated. 20

2. A life preserver consisting of an inflatable pneumatic ring having an internal inflating means adapted to be actuated manually, said ring having an inside diameter which will permit same to pass over the wearer's head to enable same to be worn
25 around the neck, but which cannot be removed from the neck of the wearer while inflated. 30

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