J. HERLIHY.

LIFE SAVING GARMENT.

APPLICATION FILED OCT. 17, 1912.

1,087,491. Patented Feb. 17, 1914.

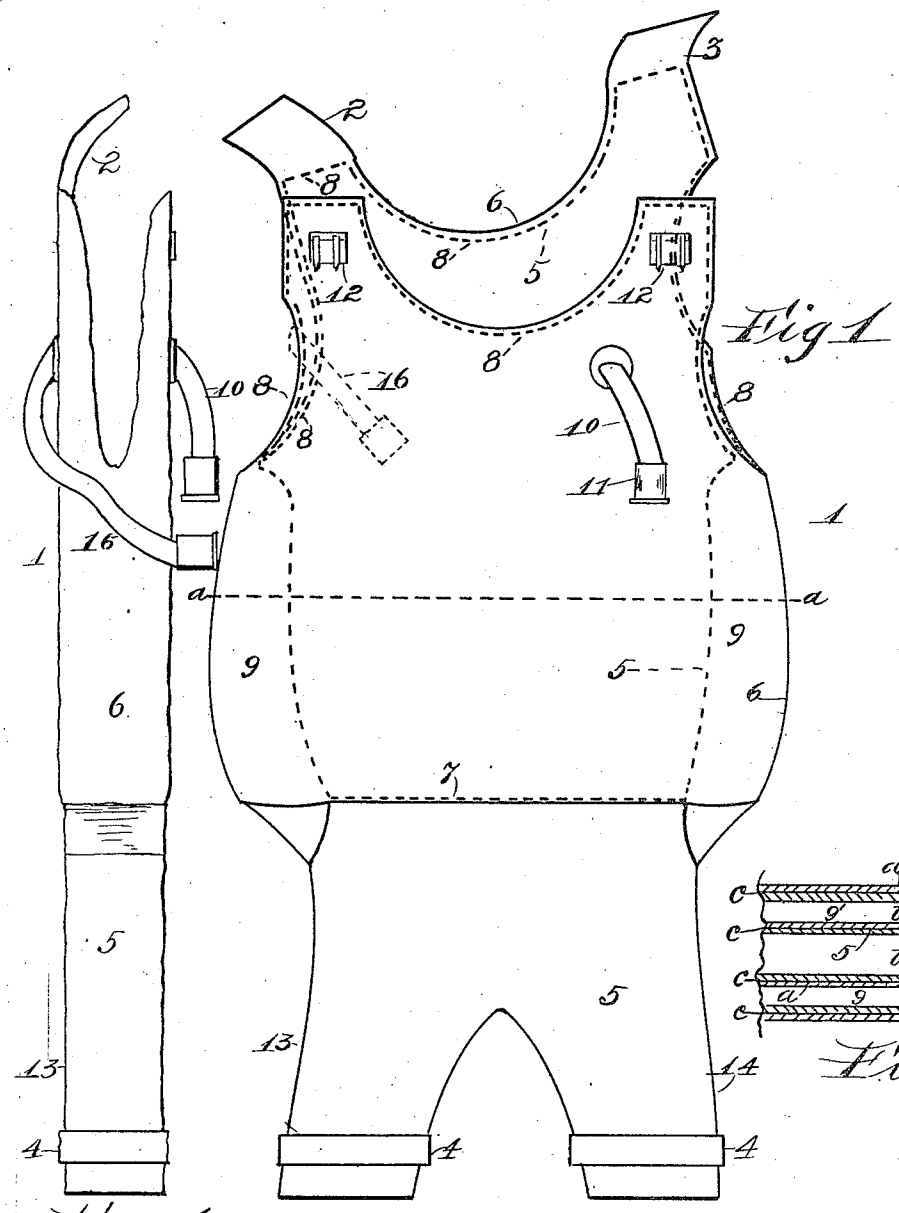


Fig 1

Fig 3

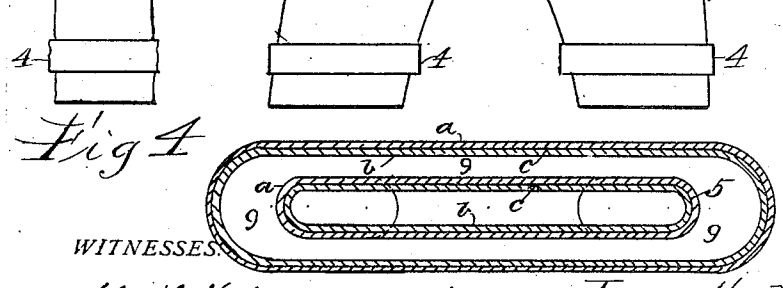


Fig 4

Fig 2

WITNESSES:

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LIFE-SAVING GARMENT.

1,087,491. Specification of Letters Patent. Patented Feb. 17, 1914.

Application filed October 17, 1912. Serial No. 726,343.

To all whom it may concern:

Be it known that I, JAMES HERLIHY, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented new and useful Improvements in Life-Saving Garments, of which the following is a specification.

My invention relates to life-saving garments, and especially to buoyancy dresses, and it has for its object to provide a garment of the character specified, made of air-tight material, which may be donned with great speed, and readily prepared for operation, in which the buoyant air is located in the best position for safety and carrying power, and which prevents the water from circulating about the vital parts of the body, whereby whatever water may touch the skin will become warmed by the body.

With the above-stated objects in view, my invention consists in combining with an inner member adapted to hug the body and cover the same from the shoulders to that part of the legs lying just below the thighs, of an outer sack-like member attached at the bottom to the inner member along a line drawn about the middle of the stomach, and at the top along the line about the neck and under and over the arms, leaving a space between the outer and inner member adapted to be expanded by the breath of the wearer, and means for so expanding the garment.

It also consists in the novel parts, combinations, and arrangements set forth in the following description, particularly pointed out in the claims, and illustrated in the accompanying drawing, of which—

Figure 1, is an elevation of my improved garment, showing the outer member in full lines, and the inner member in dotted lines: Fig. 2, is a cross sectional view taken along the line *a—a* Fig. 1, the garment being supposed to be in a more or less flattened form: Fig. 3, is a cross sectional, broken view similar to Fig. 2, showing a modified mode of attaching the inner and outer members along one side, the other side of the garment being the same; and Fig. 4, is a side view in elevation, showing modified inflating means for use with the modification shown in Fig. 3.

The same symbol of reference marks the same part in whichever view said part may appear.

Referring to the drawing, 1, is a single piece garment into which a person may quickly step, and which may be quickly strapped over the shoulders by the straps 2, and 3, and which is automatically secured about the legs just below the thighs by elastic bands 4. The garment thus covers the space about the vital parts of the body.

An inner member 5, adapted to hug the body extends from the shoulders to lines about the legs just below the thighs. An outer member 6, much larger than the inner member, is attached along its bottom line to said inner member, along a line 7, running around the body about the middle of the stomach and across the back. It is attached at its upper end along the line 8, of the neck and arms of the inner member, leaving a space 9, between the inner and outer member, for receiving the air to inflate the garment, a tube 10, having a valve 11, of any suitable construction for holding the breath in the space 9, after it has been breathed into said space, allows the wearer to breathe into said space, and inflate the garment for buoyancy, so that a person need only step into the garment, fasten the shoulder straps as by the buckles 12, and breathe into tube 10, to prepare himself for the water.

As so far described, my device has a carrying capacity of close to a thousand pounds, and tends to lift the head of the wearer high out of the water.

One of the principal features of my invention consists in providing a readily donned buoyancy garment with means for preventing the free circulation of the water between the body and the garment; and said feature consists in the combination with an outer member 6 of an inner member 5, which is pressed by the air in the space 9 against the body of the wearer from the shoulders down to the line 7. So arranged, what little water leaks in to the body is warmed thereby and the wearer kept safe from cramps and chilling. As aforesaid the legs 13 and 14 are compressed by the elastic bands 4. According to the described construction, the air is confined to the upper part of the body, front and back, and is supplied through a single tube 10. A modification of such construction consists in separating the front and back air spaces from each other, which I do by providing a line of attachment 15, Fig. 3, between the two members at the side, one side only being shown in the drawing; and using an extra tube 16, Fig. 4, to inflate the

back portion 9′ the front portion 9, being inflated through tube 10, and tube 16, being long enough to be brought to the front of the wearer and within reach of his mouth. The modified form has the advantage of allowing for a break in either the front or back part, either one alone being amply sufficient to support the body, and the head being held so high that it makes little difference whether the buoyancy part is at the front or back.

The material used for my garment is a finely woven cloth fabric, and is composed throughout of two parts *a* and *b* glued together allowing attachment by both sewing and gluing, and giving great strength to the garment. The glued portion is represented by the line *c*, the glued portion being made of sufficient thickness to attain the requisite airtightness, the average loss in thirty-six hours being only about one per cent.

Having described my invention what I claim as new and desire to secure by Letters Patent of the United States, modifications within the scope of the claims being expressly reserved, is—

1. A life-saving garment comprising a single piece suit of flexible airtight material having an inner member extending from the neck to lines about the legs just below the thighs, and adapted to hug the body; and an outer member attached at its bottom to said inner member along a line drawn around the middle of the stomach and the back, at its front upper end along a line drawn around the throat and armholes, at its back upper end along a line drawn around the back of the neck and armholes, leaving a space between said inner and outer members, elastic bands about the legs of said garment, and means for admitting and retaining breath in the said space.

2. A life-saving garment comprising a single piece suit of flexible airtight material having an inner member extending from the neck and shoulders to lines about the legs just below the thighs, and adapted to hug the body; and an outer member attached at its bottom to said inner member along a line drawn around the middle of the stomach and the back, at its upper front end along a line drawn around the throat and armholes, at its back upper end along a line drawn around the back of the neck and armholes, and at the sides along the vertical line 15, leaving a front space and a back space; separate means for admitting and retaining breath in said spaces; and elastic bands about the legs of said garment.

In testimony whereof, I have hereunto signed my name this 10th day of October, 1912.

JAMES HERLIHY.

Witnesses:
FRANK P. MEDINA,
JOHN R. TYRRELL.