J. M. PINEAU.

LIFE PRESERVER.

APPLICATION FILED APR. 18, 1913.

1,104,382. Patented July 21, 1914

Fig. 3.

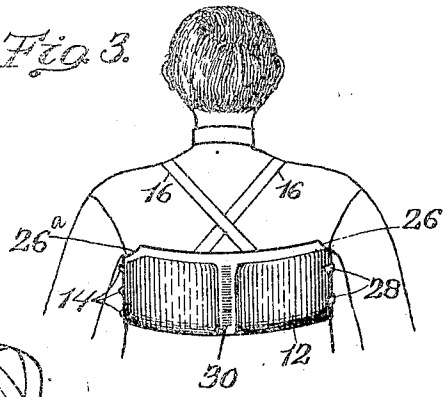


Fig. 1.

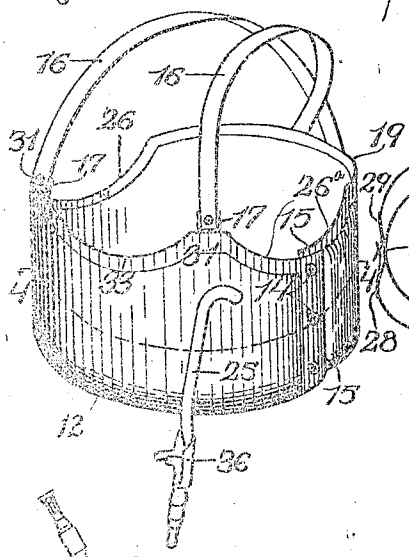


Fig. 4.

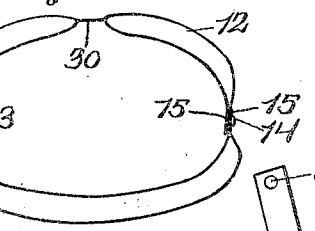
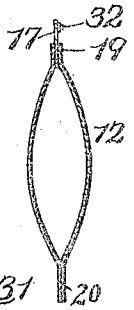


Fig. 8.



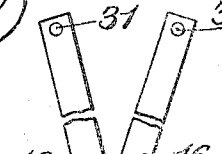


Fig. 2.

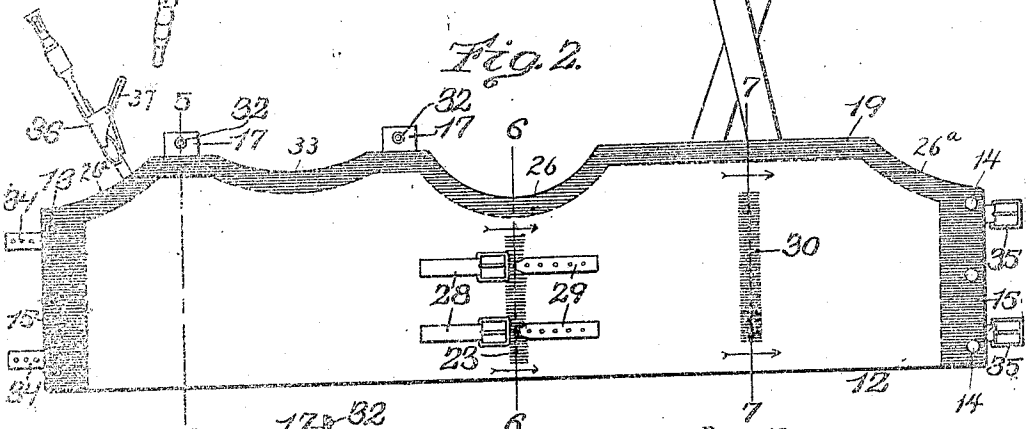


Fig. 5.



Fig. 6.

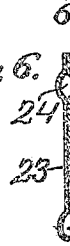
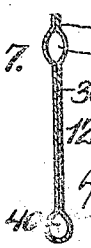


Fig. 7.



Witnesses:
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UNITED STATES PATENT OFFICE.

JEREMIAH M. PINEAU, OF QUINCY, MASSACHUSETTS.

LIFE-PRESERVER.

1,104,382. Specification of Letters Patent. Patented July 21, 1914.

Application filed April 18, 1913. Serial No. 762,113.

To all whom it may concern:

Be it known that I, JEREMIAH M. PINEAU, a subject of the Dominion of Canada, of Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Life-Preservers, of which the following is a specification.

This invention relates to a life-preserver comprising a double-walled inflatable band, adapted to encircle the body of the wearer below the arms, to be worn under an outer garment, the band being provided with an inflating tube whereby it may be inflated while in place on the wearer's body, as shown by the Gaudet Patent, 931,009.

The invention has for its chief object to provide an inflatable body-encircling band, the inflation of which is confined mainly to the portions bearing on the back and front of the wearer's body, the portions on the sides of the body under the arms being relatively thin and unaffected as to thickness by the inflation of the back and front portions, so that the free action of the wearer's arms is not impeded.

Other objects of the invention will be hereinafter set forth.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a perspective view of a life-preserving band embodying my invention, in the form it assumes when on the wearer's body and deflated. Fig. 2 represents a side view, showing the band opened. Fig. 3 represents a rear view showing the band in place on the wearer's body. Fig. 4 represents a section on line 4—4 of Fig. 3, the band being inflated. Fig. 5 represents a section on line 5—5 of Fig. 2. Fig. 6 represents a section on line 6—6 of Fig. 2. Fig. 7 represents a section on line 7—7 of Fig. 2. Fig. 8 represents a view similar to Fig. 5, showing a modification. Figs. 5, 6, 7, and 8 show the band inflated.

The same reference characters indicate the same parts in all of the figures.

In carrying out my invention, I construct from flexible material, such as a rubber-treated fabric, which is impervious to air, a double-walled band 12, adapted to encircle the human body below the arms, and composed of two continuous side portions adapted to confine an interposed body of air. The ends of the band are adapted to meet under one of the arms of the wearer, and provided with fasteners whereby they may be detachably connected, as indicated by Figs. 1, 3 and 4, said fasteners being preferably composed of stud members 13, attached to one end, and snap-socket members 14, attached to the other end. The outer and inner walls of the band may be made of a single sheet of material folded along its longitudinal center to form the lower edge of the band as shown in the above-mentioned Gaudet patent, the edge portions of the folded sheet being cemented together, as indicated by the shaded marginal portions in Fig. 2, to form air-tight seams or joints, the cement-connected portions at the opposite ends of the band forming thin non-inflatable ends or tabs 15, to which the fastening members 13, 14 are attached. The said cement-connected portions at the upper portion of the band form a thin non-inflatable upper edge 19, to which the shoulder straps 16 and tabs 17, hereinafter described, are attached. I do not limit myself, however, to the one piece construction above described, and may make each wall in a separate piece, as indicated by Fig. 8, which shows the lower edge portions of the walls cemented together to form a thin non-inflatable lower edge 20.

Portions of the walls of the band are cemented together along a line extending vertically or crosswise of the band, midway between its ends, these cement-connected portions, indicated by the vertical central shaded area, Fig. 2, forming a thin non-inflatable central portion 23, which, when the band is in use, is located under the arm of the wearer opposite that under which the meeting ends are located. The non-inflatable portion 23 does not extend entirely across the band, portions of the side walls at opposite ends of the portion 23 being left separable and forming narrow air passages 24 through which air passes from the front to the back portion of the band when the band is being inflated through a tube 25, attached to the outer wall of the front portion. Although I have shown two passages 24, it is obvious that one of these may be omitted, if desired. Said passages are so narrow that the portions of the walls which form them are capable of but little distention. The thin end tabs 15 and the

thin central portion 23, located under the arms of the wearer, prevent the distention of the band under the arms, as indicated by Fig. 4, so that the band when inflated does not interfere with the free play of the arms. The upper edges of the inflatable front and rear portions of the band are therefore adapted to be located close to or above the level of the arm pits of the wearer, the parts under the arm-pits being thin and non-inflatable so that they do not obstruct the arms. To permit the elevation of the upper edge of the band above the arm pits, I curve the upper edge of the band at 26 and 26ª, these curved edges forming arm-pit recesses, as shown by Figs. 1 and 3.

The thin flexible central portion 23 is adapted to be bent or looped to reduce the circumference of the band. Straps 28, 29, are attached to the band at opposite sides of the portion 23, the straps 28 having buckles adapted to engage the straps 29. These straps are adapted to contract the band, the portion 23 thereof being bent, looped, or gathered when the straps are pulled to contract the band. Portions of the walls of the band are cemented together along a vertical line midway between the portion 23, and one of the ends of the band, these cemented connected portions forming a thin non-inflatable portion 30, which is at the center of the back portion of the band. Air passages 40 extend across the ends of the portion 30.

When the band is inflated, the outward bulging of its outer wall at the portion 30 is limited, so that a flat portion or slight recess is formed on the outer surface of the band at the center of the wearer's back, as shown by Fig. 4. This portion is adapted to bear on a seat back and steady the wearer's body against sidewise movements.

The shoulder straps 16 are provided at their outer ends with socket-fastening members 31, and the tabs 17 with stud-fastening members 32, adapted to engage the members 31. The straps are crossed at the wearer's back and pass over the shoulders. The arrangement of said straps is such that the thin non-inflatable portions formed by the connected tabs 15 and by the portion 23 are necessarily located under the wearer's arms.

The upper edge of the front portion of the band is preferably provided with a recess 33 to reduce its height at the front of the wearer's breast. Straps 34 may be attached to one end of the band, said straps being adapted to engage buckles on straps 35 on the other end of the band.

The inflating tube 25 may be provided with a closing device such as a clamp 36, adapted to close the tube by flattening it, the clamp having a lever 37, which may be adjusted to permit the tube to open for the inflation of the band. The parts described as cemented together, may be treated with rubber cement adapted to be vulcanized. The described construction providing for the meeting of the ends of the band under one of the arms of the wearer also provides a continuous inflatable front portion extending entirely across the breast of the wearer. All the fastening members employed may be straps and buckles.

I claim:

1. A double-walled body-encircling band, composed of two continuous side portions adapted to confine an interposed body of air, and united at their opposite ends to form thin end tabs, and between their ends to form a thin central non-inflatable portion which subdivides the band into front and rear inflatable portions, a narrow air passage being provided which extends across said non-inflatable portion and connects said inflatable portions, an inflating tube connected with one of the inflatable portions, fastening devices adapted to connect said end tabs, and straps adapted to support the band from the wearer's shoulders, said straps being arranged to hold the thin portion formed by the connected tabs under one arm, and to hold the said thin non-inflatable portion under the other arm, so that the said thin portions permit free play of the wearer's arms.

2. A life-preserver comprising a double-walled body-encircling band having inflatable front and back portions, and end portions adapted to meet under one arm of the wearer, and adapted to be detachably connected, the walls being connected partly across the band between the front and back portions to form a thin flexible portion under the other arm of the wearer, and means for contracting the band at said flexible portion.

In testimony whereof I have affixed my signature, in presence of two witnesses.

JEREMIAH M. PINEAU.

Witnesses:
C. F. Brown,
P. W. Pezzetti.