S. P. EDMONDS.

LIFE PRESERVER.

APPLICATION FILED MAY 14, 1917.

Patented July 9, 1918.

1,272,336.

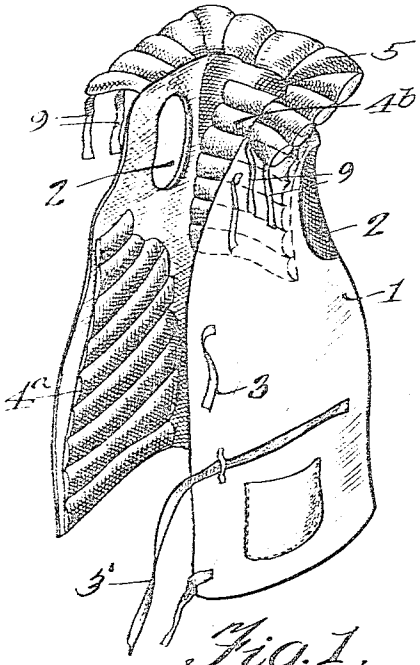


Fig. 1.

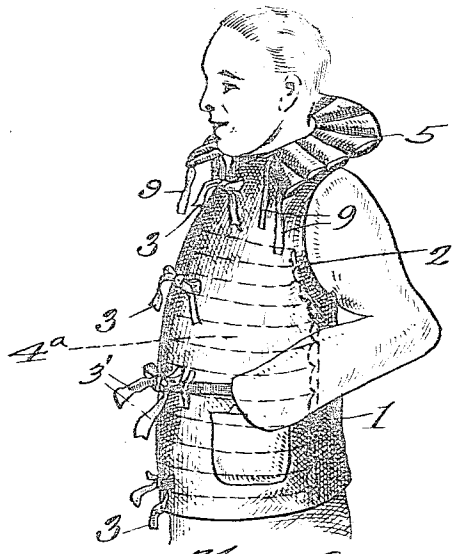


Fig. 2.

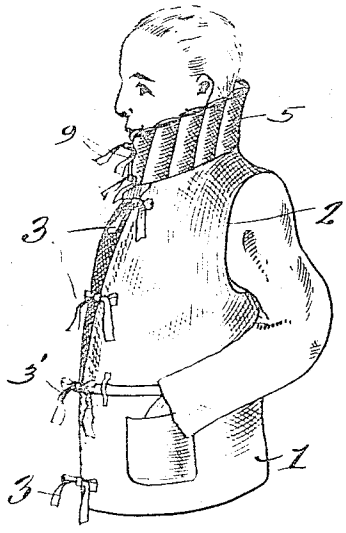


Fig. 3.

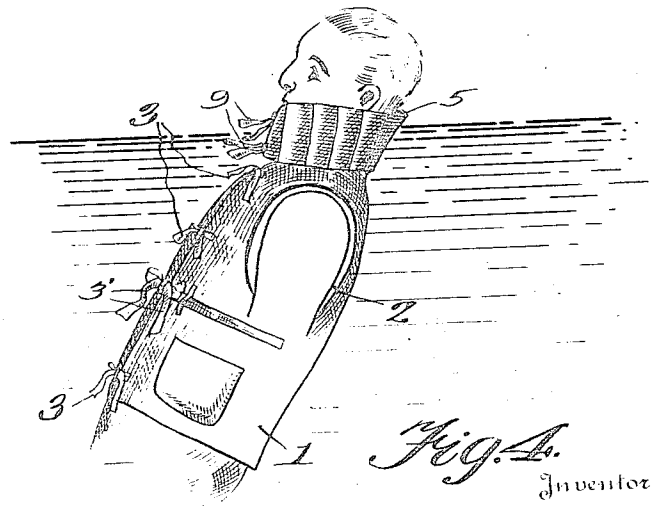


Fig. 4.

Inventor

S. P. Edmonds,

By Eugene C. Brown

Attorney

UNITED STATES PATENT OFFICE.

SAMUEL P. EDMONDS, OF CATONSVILLE, MARYLAND.

LIFE-PRESERVER.

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To all whom it may concern:

Be it known that I, SAMUEL P. EDMONDS, a citizen of the United States, residing at Catonsville, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Life-Preservers, of which the following is a specification.

My invention relates to life preservers and particularly to improvements which will permit them to be worn without inconvenience while engaged in work and without interfering with the movement of the body.

It is desirable that the buoyant material should be so disposed as to particularly support the head when in the water and also to insure the proper position of the body in case of exhaustion or other loss of control. One of the objects of this invention is to provide a life preserver that shall most efficiently perform these functions. Another object is to provide a garment that is especially adapted for aviators and will serve as a protection against the cold or biting winds and drafts to which they are subjected when flying at terrific speed through the air and at high altitudes.

The manner in which I provide for these several purposes will be understood from the following description in connection with the accompanying drawings, in which—Figure 1 is a perspective view of a life preserver embodying my invention; Figs. 2 and 3 are perspective views of the same showing the manner of applying it to the person; and Fig. 4 is a perspective view showing substantially the position which a person would naturally assume in the water if under the control of the buoyant action of the life preserver.

I have found that it is very important to provide a support for the head that will insure the maintenance of a proper posture of the head when the wearer has lost control of the body under exhaustion or when unconscious. The natural tendency of the head to fall forward or to one side must be counteracted. I have also found that it is desirable to permit a certain freedom of movement between the head support and the body support while retaining a certain connection or coöperation between them. By reason of its resemblance to a large collar, I may designate the head support as a buoyant collar member. By reason of its soft pliable nature, its water resistant qualities, lightness and great buoyancy, I prefer to fill or pack the parts of my life preserver with silk-floss, known commercially as "kapok."

In the drawings I have illustrated one form of my invention in which the life preserver resembles a sleeveless coat or jacket with a wide quilted or tufted collar which normally stands out from the edge of the neck life a ruff or somewhat after the fashion of an Elizabethan collar as illustrated in Figs. 1 and 2, the front edges being provided with tapes so that they may be brought together and tied as shown in Figs. 3 and 4.

The body of the jacket may be made of canvas or other suitable fabric, and shaped to conform to the body of the person, being provided with arm-holes 2 and tapes or straps 3, and a belt 3′ if desired, by which it may be secured in position. The buoyant material which is preferably silk-floss known as kapok, the best grade being known commercially as "ilanasilk," is carried by the canvas body in any suitable manner, as by stuffing it between layers of the fabric and securing it in place in any well-known manner as by quilting, tufting or fulling. This tufted or quilted buoyant material extends substantially over the whole chest portion and to the bottom of the jacket, as indicated at 4^a, and from adjacent the top of the jacket at the back to about the bottom of the shoulder-blades, as indicated at 4^b. The collar 5 is entirely stuffed full of the buoyant material so that it has sufficient bulk or stiffness to cause it to stand out from the neck seam like a ruff, as illustrated in Fig. 1 and does not lie down upon the shoulders.

I have distributed the buoyant material in the manner above described for the purpose of causing the center of buoyancy of the life preserver and body of the person wearing it to be high above his center of gravity when in the water. This is accomplished by the greater bulk of the buoyant material which extends over the chest and in front of the trunk to a point below the waist line. The part which extends over the upper part of the back from the neck to the shoulder-blades causes the body to assume the proper position with a backward inclination, about as indicated in Fig. 4, although probably in most cases the backward

inclination would be somewhat greater than this. When the body of the person is being tossed about by the waves, the body is rolled over from side to side and is continually liable to be thrown over upon the face, this tendency being increased by the falling forward of the head when the person becomes unconscious or is in a semi-comatose state. The ordinary life preserver does not correct or counteract this tendency and consequently does not prevent drowning under such circumstances. I have overcome this defect by combined action of the buoyant mass over the front of the trunk and the buoyant collar, the greater part of which is in front of the ears as will be observed from an inspection of Fig. 4. When therefore, a wave tends to roll the body over upon one side, this is resisted by the buoyancy of the greater forward portion of the collar, which is directly connected to the jacket, and by the greater mass of the buoyant material over the front of the body. The resultant action restores the body to a position with the face uppermost. The thick buoyant collar absolutely prevents the head from falling over to one side below the water line and as it is tossed about by the waves, acts constantly as a restoring or counteracting force to maintain the face uppermost.

While the collar should be secured in the position shown in Figs. 3 and 4 by tying the tapes 9, when a person is about to jump overboard, yet even when untied and in normal position, the upstanding tendency causes it to be moved upwardly toward the head when struck by the water, which is an important feature in a life preserver.

When used by aviators in their flights, the collar member is turned upward into the position shown in Fig. 3 and the ends are brought together or even crossed and secured by tying the tapes 9. In this position the neck, back of the head, ears and lower part of the face are thoroughly protected against the strong air pressure and biting cold winds to which aviators are exposed in rapid flight. Moreover, in case of accident, if they fall into a body of water the head is protected against the shock and the parts are in position to most effectually support the body. It will be further observed that the body member forms an effective protector for the chest.

The peculiar advantage of my present improvement in life preservers will be apparent from the foregoing description. To reiterate, the arrangement and coöperative relation of the several buoyant portions results in a most advantageous distribution of the buoyant material for the purpose of effecting the proper support of the body with a minimum amount of material. The resultant buoyant force with the center of buoyancy high above the center of gravity acts to place the body in the most advantageous position for maintaining the head above the water and thrown backward to insure the nose and mouth above the surface.

I have particularly described the form illustrated in the accompanying drawings for the purpose of disclosing an embodiment of my invention but it is obvious that various changes can be made within the purview of my claims and without departing from my invention.

I claim:—

1. A life preserver, comprising a buoyant body member having the greater portion of its buoyancy in the front part, and a buoyant collar member secured to the neck of body member and normally oustanding therefrom.

2. A life preserver, comprising a buoyant body member and a buoyant collar member secured by a neck seam to the body member and normally outstanding therefrom.

3. A life preserver as set forth in claim 2, and means for securing the front edges of the collar together.

4. A life preserver, comprising a jacket body member of suitable fabric and carrying buoyant material substantially throughout its front part and in the upper part only of its back part, and a buoyant collar member secured by a neck seam to the body member and normally outstanding therefrom.

In testimony whereof I affix my signature in the presence of two witnesses.

SAMUEL P. EDMONDS.

Witnesses:

FRANCIS H. DUFFY,

EDNA G. DUNCAN.