Feb. 13, 1934. K. GUNTHER 1,947,005

SAFETY BATHING GARMENT AND LIFE PRESERVER

Filed Nov. 19, 1932

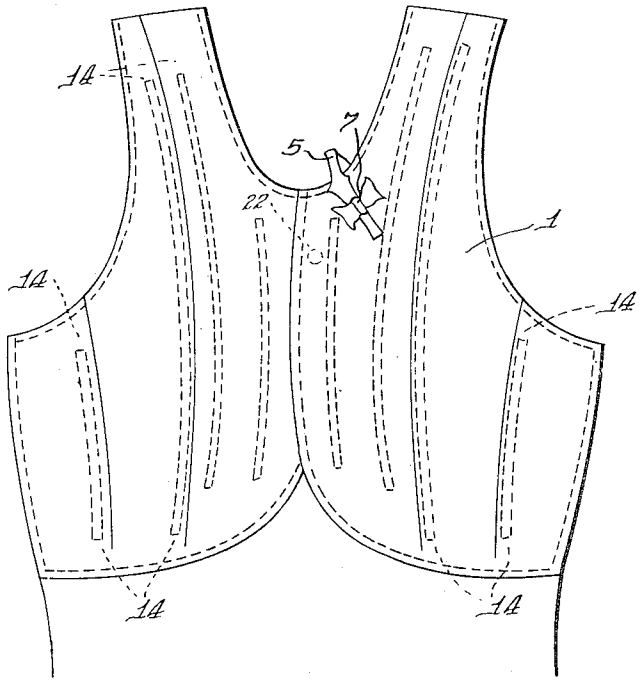

Fig. 1.

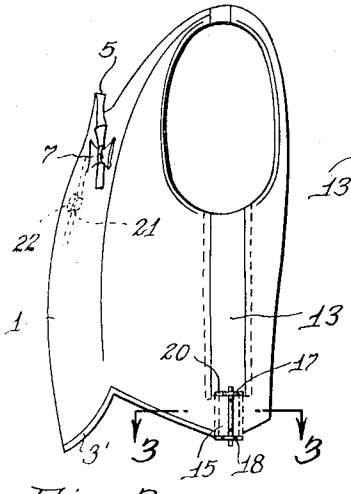

Fig. 2.

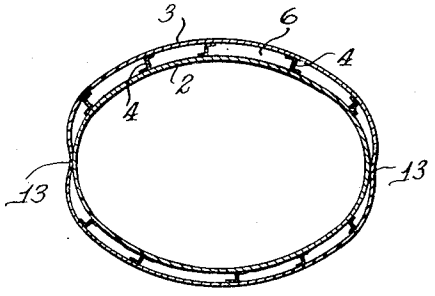

Fig. 4.

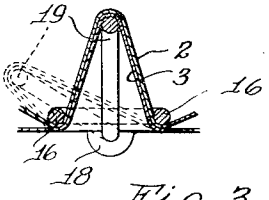

Fig. 3.

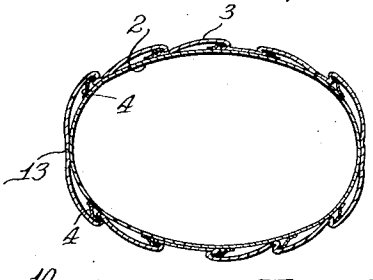

Fig. 5.

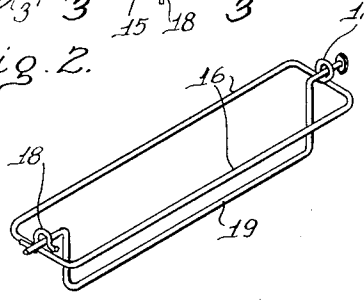

Fig. 6.

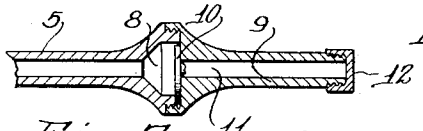

Fig. 7.

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SAFETY BATHING GARMENT AND LIFE PRESERVER

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Serial No. 643,354

3 Claims. (Cl. 9—20)

The present invention pertains to a novel device designed to promote the safety of bathers, swimmers and persons who are compelled to take to the water in an emergency such as shipwreck. The principal object of this invention is to provide a device of this character which may be readily inflated and which maintains a neat appearance whether inflated or not.

The matter of appearance is recognized as important in the vicinity of bathing resorts whether the wearer be on land or in the water. The device is so constructed that, when deflated, it is free from the exposed sagging appearance and is hardly distinguishable from any ordinary garment. To this end the inflatable portion of the garment is of two plies with flexible or non-flexible stays connecting the two plies of material. The outer ply is of larger dimensions than the inner to allow it to be moulded or shaped into pleats or fulness, suiting the prevailing mode, over the inner when in a deflated condition and thus present a neat and satisfactory appearance. Inflation therefore is limited by pleats and stays combined, so that it is uniform and the outer fabric is spaced uniformly from the inner fabric throughout, thereby avoiding an irregular and bulging appearance.

The invention further embodies means for dividing the garment into separate, air-tight compartments, so that accidental leakage from one compartment does not affect the other. This and other incidental characteristics of the invention are described in the detailed specification.

The safety garment may be used as a separate vest or as an integral part of a bathing suit. As a separate member, it may be buttoned or otherwise fastened to the main garment, if desired. Its length or shape at the bottom edges being a matter of individual choice, enhancement of outline or ornamentation.

The invention is fully disclosed by way of example in the following description and in the accompanying drawing, in which—

Figure 1 is an elevation of the flattened out front of a garment according to the invention;

Fig. 2 is a side elevation varying the lines at the bottom edges, surplus material pleated at the lower edges and armholes and showing communicating areas;

Fig. 3 is a section on line 3—3 of Figure 2;

Fig. 4 is a cross section of the garment in inflated condition;

Fig. 5 is a similar section of the garment in a deflated condition;

Fig. 6 is a perspective view of the buckle or clasp; and

Fig. 7 is a longitudinal section of the air valve.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figures 1 and 2 is illustrated a garment 1 in the form of a vest or bodice which may be worn separately, integral with, or attached to an ordinary bathing suit or which may be, or appear to be, the upper part of a long garment such as a pair of trousers, drawers or skirt. The fastening of the separate bodice 1 to the body of the wearer, or the means of attachment to the lower part of the garment may be anything that is suitable for the purpose.

The garment 1 embodies two plies of cloth or other fabric indicated by the numerals 2 and 3 in Figure 4. The material may be water-proofed fabric or other substance adapted to contain air without appreciable leakage. Flexible or non-flexible stays or straps 4 are secured between the walls 2 and 3 in order to limit expansion of the outer fabric 3 when the intervening space is inflated in the manner presently described.

An inflation tube is mounted in communication with the space 6 between the walls 2 and 3 and is disposed at any suitable or convenient part of the garment. In the example illustrated, it is mounted in the forward part of the neck opening where it may be held, ready for instant use, under a strap, fastened to the outside, to resemble a bow as at 7 or any neat looking ornament of similar nature. The outer part of the tube 5 is enlarged to form a substantially conical chamber 8 over which is threaded or cemented a mouthpiece 9 and between tube 5 and mouthpiece 9 is set a flap-valve 10, adapted to close against the comparatively small passage 11 in the mouthpiece 9, but any check-valve may serve the purpose. The air chambers are obviously inflated by blowing into the mouthpiece 9, whereupon the valve 10 opens into the chamber 3 to permit flow of air into the tube 5. When the blowing is discontinued, the pressure in the tube 5 holds the valve 10 against the passage 11, so that escape of air from space 6 is prevented. A cap 12 may be screwed to the free end of the tube 9 or it may be left open for easier access in case of emergency.

On inflation, the garment assumes the condition shown in Figure 4, wherein the outward bulging of the outer fabric 3 is limited by the stays 4. Thus, the outer surface of the inflated garment is comparatively uniform and smooth and is spaced

only slightly from the inner wall 2. By this means, a neat and inconspicuous appearance of the inflated garment is preserved. At the sides, the two walls are preferably fastened together as indicated by numeral 13, in Figures 2 and 4, thereby dividing the garment into two compartments or three compartments if the garment has a front opening. A similar division may be made in the center back or front if the opening is on the shoulder. The joint between back and front portions terminates short of the edge of the garment, leaving an opening which permits communication between what would otherwise be separate compartments. It will also be seen in Figure 1 that the stays, if arranged vertically, but which may be arranged any way to suit possible exigencies, terminate short of the outer edges of the garment, as indicated by the numeral 14, to avoid air tight subdivisions of the compartments. Thus, the single tube 5 is sufficient for inflation of the whole garment. The lower edge of the vest shown in Figure 2 is suitably shaped and pleated as indicated by the numeral 3'.

The point of communication between the compartments is obviously in line with joint 13 at each side and is indicated by the numeral 15 in Figure 2. In order to complete this joint, (which would be unnecessary if the garment is made with a single chamber only), extending over the entire area at this point after inflation, there is provided a buckle or clasp of the type shown in Figures 3 and 6. This device embodies a rectangular frame of wire or any desirable material 16 with a closed loop 17 at one end and an open loop 18 at the other end. A U-shaped pin member 19, is also provided, with its ends adapted to be received respectively in the loops 17 and 18 as illustrated in Figure 6. The depth of the U-shaped member is greater than half the width of the frame 16 for the purpose which will be presently described.

The frame 16 is applied vertically along the open portion 15 and on the inside of the garment, with one loop projecting beneath the lower edge of the garment and the other loop projecting through a button hole or slot 20 formed through the garment at the end of joint 13. The member 19 is placed at the outer surface of the garment and pressed into the frame until its ends may be inserted in the loops 17 and 18. The buckle and material held thereby are then in the position as illustrated in Figure 3. The pin 19 may turn on its axis defined by the loops 17 and 18 at the midpoints of the ends of the frame and lie flat, but cannot swing out of the frame because its depth is greater than half the width of the frame. The final position of the pin is shown in dotted lines in Figure 3.

The device may be deflated by removing the cap 12, if such there be, and holding the valve in open position by a wire or stick inserted in the mouthpiece 9. But for convenience a separate opening 21 with a screw cap 22 is provided which may be placed on any convenient location, preferably beneath the outer overlap at the front. On deflation, the stays obviously collapse and the outer material 3 is thereby caused to fall in the form of pleats as shown in Figure 5, or whatever shape it was originally moulded to. The two plies of material at the joints 15 are of equal size so as to prevent any possible leakage from one compartment to another.

Because of the neat appearance of the garment when deflated, it may be used for street wear as well as on the beaches and in the water. As a bathing suit, it is desirable because of the moderate expansion or inflation as already described. It may also be carried on vessels as a life preserver. If it should become partially deflated by slow leakage while the wearer is in the water, the wearer may blow more air into it because of the proximity of the filling tube 9 to his mouth. Further, because of the separation of the device into compartments leakage from one compartment does not affect the others, and the garment still remains buoyant. For total deflation, the buckles 16—19 are obviously removed.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention, as indicated by the appended claims.

What I claim is:—

1. An inflatable garment comprising two plies of material, the outer ply of which material is larger than the inner, stays secured to and between said plies to limit expansion of the outer ply on inflation, joints formed in said garment and substantially dividing the interior thereof into a plurality of compartments while leaving comparatively small areas of communication between such compartments, and detachable clasps applicable to said areas for completely obstructing communication therethrough.

2. An inflatable garment comprising two plies of air-tight material, the outer ply of which is larger than the inner, flexible stays secured to and between said plies to limit the expansion of the outer ply on inflation, joints formed in said garment and substantially dividing the interior thereof into a plurality of compartments while leaving comparatively small areas of communication between such compartments, and detachable clasps applicable to said areas for completely obstructing communication therethrough.

3. An inflatable garment comprising two plies of air-tight material, the outer ply of which is larger than the inner, stays secured to and between said plies to limit the expansion of the outer ply on inflation, joints formed in said garment and substantially dividing the interior thereof into a plurality of compartments while leaving comparatively small areas of communication between such compartments, detachable clasps applicable to said areas for completely obstructing communication therethrough, a filling tube communicating with one of said compartments, and a check valve in said tube.

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