

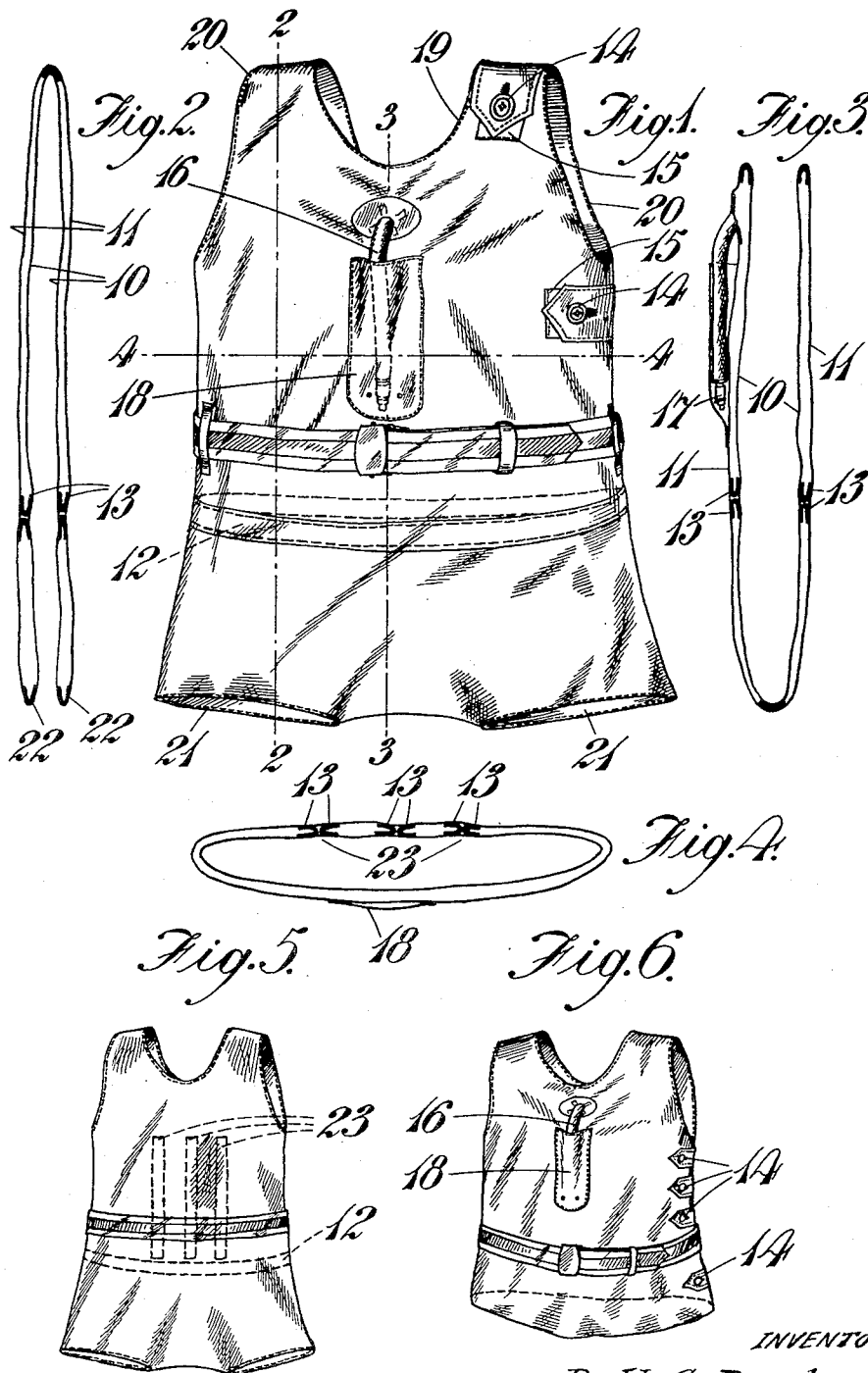
May 1, 1934.

D. H. C. BUXTON

1,956,890

BUOYANT CLOTHING FOR PERSONAL WEAR

Filed Nov. 4, 1932



INVENTOR

D. H. C. Buxton

By Lacey & Lacey

Atty.s

UNITED STATES PATENT OFFICE

1,956,890

BUOYANT CLOTHING FOR PERSONAL WEAR

Douglas Henry Cedric Buxton, Hove, England

Application November 4, 1932, Serial No. 641,272
In Great Britain November 6, 1931

2 Claims. (Cl. 9—20)

This invention relates to buoyant clothing for personal wear, and especially to that of the kind in which the garment comprises two distinct thicknesses of material which are secured together so as to provide between them one or more air receptacles, the arrangement being such that, when air is injected into such receptacle or receptacles, the general buoyancy of the user is increased primarily with a view to preventing the submersion of the wearer.

The primary object of the present invention is to provide an improved form and construction of garment which is extremely robust in service, and at the same time is both comfortable and inconspicuous in use.

According to the present invention in a pneumatic garment of the kind referred to, the inner and outer walls of the air receptacle are secured together by means of a strip of thin material, such as air proof tape, which is bent back upon itself to assume a V or U cross-section, the limbs of the V or U being both directed towards the air-containing part of the receptacle. Preferably one or more strips are secured between the inner and outer walls of the air receptacle, and at the back portion of the garment so as to control the distribution of the air in the receptacle, while, if desired, all joints between the inner and outer walls of the air receptacle may be comprised by a strip or strips of such thin material which is doubled longitudinally and secured so that the edges of the strip or strips are directed towards the air-containing part of the receptacle. Conveniently the upper part only of the garment is formed as an air receptacle, and the two thicknesses of the back portion of the garment may advantageously be joined together by doubled strips arranged vertically to control the distribution of air in the receptacle, this being especially advisable and beneficial in the case of bathing costumes, as it enables the user to be maintained at a high level in the water for a greater part of the air in the receptacle is compelled to remain in the front portion of the garment.

In order that the invention may be thoroughly understood, it is illustrated in the accompanying drawing in which

Figure 1 is a front elevation of a bathing costume;

Figure 2 is a sectional elevation on the line 2—2 of Figure 1;

Figure 3 is a further sectional elevation on the line 3—3;

Figure 4 is a transverse section on the line 4—4;

Figure 5 is a rear elevation to a reduced scale; and

Figure 6 is a front elevation of a modified form of garment.

Referring to Figures 1 to 5, which show a pneumatic bathing or boating costume, it will be seen that the garment consists primarily of an inner wall 10 and an outer wall 11, these being joined together just below the waist line, as indicated at 12, by means of strips 13 of comparatively thin flexible material, such as air proof tape, each length of which is doubled longitudinally, preferably along its centre line, so as to be substantially V or U shape in cross-section. In this way, a comparatively large surface area is provided for attachment to the adjacent surfaces of the inner and outer walls 10 and 11 respectively, and when air under pressure is forced into the receptacle so formed, the walls tend to bulge slightly, but do not have any tendency to draw the strips 13 from the inner and outer walls 10 or 11, primarily due to the fact that the forces acting on the walls and the strips produce a sheer stress which operates almost entirely along the surface of joining between the strips and the walls.

The garment itself is composed of inextensible material, such as rubber-coated fabric, which is durable and which is airtight and waterproof, the seams and joints preferably being cemented, glued, or vulcanized and, if desired, being stitched in addition. Any buttons or like fittings which are required such, for instance, as those indicated at 14, are preferably attached to flaps 15 so as to prevent local straining of the walls of the garment, which latter is normally inflated by means of a tube 16 having a valve 17 and being arranged for accommodation within a pocket 18.

A neck aperture 19, arm apertures 20 and the leg apertures 21, are also formed by joining the inner and outer walls 10 and 11 respectively by means of strips of material having the above described V or U shape cross-section as indicated at 22, since this is extremely robust and readily enables an air-tight joint to be produced. It will be understood, however, that in the garments shown in Figures 1 to 5, the upper part only, i. e., that part above the circumferential joint 12 is inflated so that the garment tends to keep the body of the user in a vertical position in the water.

As shown in Figures 4 and 5, the back portion of the garment is provided with a series of vertically extending divisions 23, each of which comprises a pair of strips 13 so that, when the user assumes a substantially horizontal position in the water, the air contained in the front portion of

the receptacle between the walls 10 and 11, cannot accumulate in the back portion of the garment, and this keeps the user's body high in the water and controls the distribution of air throughout the receptacle. In this way, an improved buoyant effect is obtained which greatly assists in the usual swimming operations.

Figure 6 shows a garment which is somewhat similar in construction, except that the knicker portion is omitted, this garment being specially designed for wearing over an ordinary bathing or boating costume so that it may be discarded when not required, as, for instance, during sun bathing.

The construction of the air receptacle in accordance with the present invention may be incorporated in garments for ordinary wear, and these may be double-breasted, if desired, and may be with or without sleeves, such sleeves preferably being arranged so as not to inflate. Thus a double-breasted garment formed with a long skirt makes a good weather-proof and drown-proof costume in one, and wearing apparel of this kind can be readily designed to conform to the usual fashions, as the effect of inflation is practically imperceptible.

What I claim is:—

1. A garment comprising chest and back portions and composed of inner and outer plies of thin flexible material, means uniting said plies along their marginal portions to form an air receptacle surrounding the wearer's body, and a plurality of pairs of restraining strips arranged

vertically between the plies of the back portion of the garment and terminating short of the top of the air receptacle, said strips being each of U-shaped cross section and companion strips of each pair being arranged in back to back relation to each other and serving to limit separation of the plies of the back of the garment whereby independent constrained portions of the garment are formed, the plies forming the front portion of the garment being free from each other except at their edges.

2. A garment comprising chest, back and leg portions and composed of two separate plies of thin flexible material, strips of flexible material U-shaped in cross section uniting said plies along their marginal portions, strips between said plies extending about the garment at approximately the waist and secured to the plies to form an air receptacle surrounding the wearer's body from the waist upwards, means for inflating said air receptacle, and a plurality of pairs of strips vertically arranged between the plies of the back portion of the garment, the last mentioned strips being each of U-shaped cross section and being arranged back to back in pairs so as to limit separation of the plies and confine air in the receptacle principally at the front of the garment, the plies forming the front of the garment being free from each other except at their edges.

DOUGLAS HENRY CEDRIC BUXTON.

35

110

40

115

45

120

50

125

55

130

60

135

65

140

70

145

75

150