

Oct. 29, 1935.

W. MILNE

2,019,086

BUOYANT CLOTHING

Filed Sept. 26, 1933

2 Sheets-Sheet 1

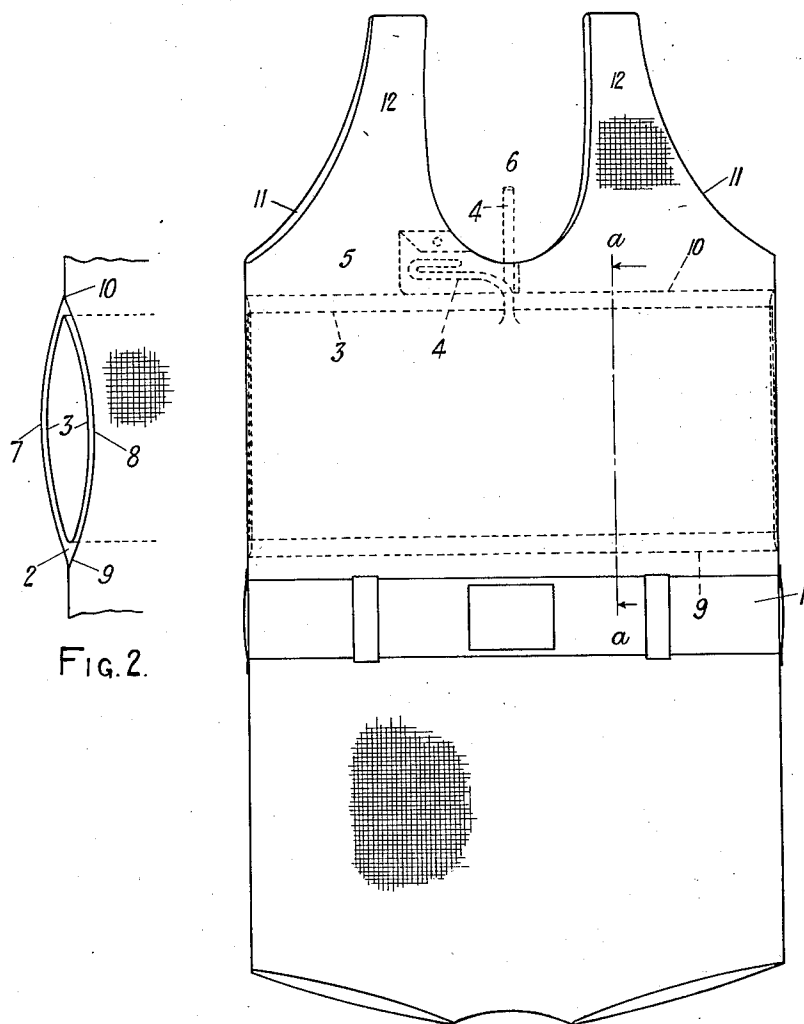


FIG. 2.

FIG. 1.

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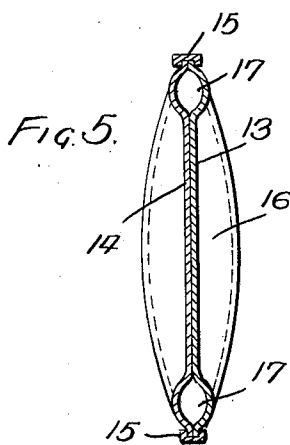
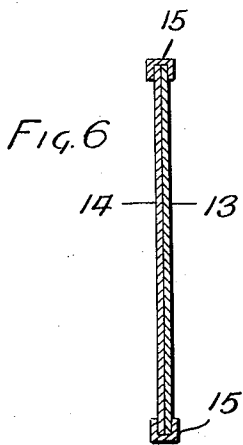
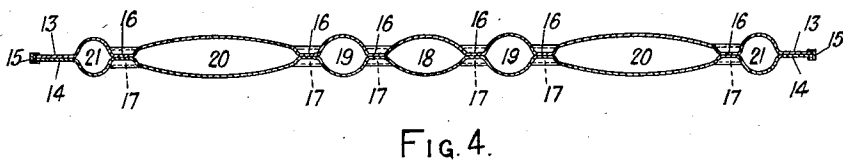
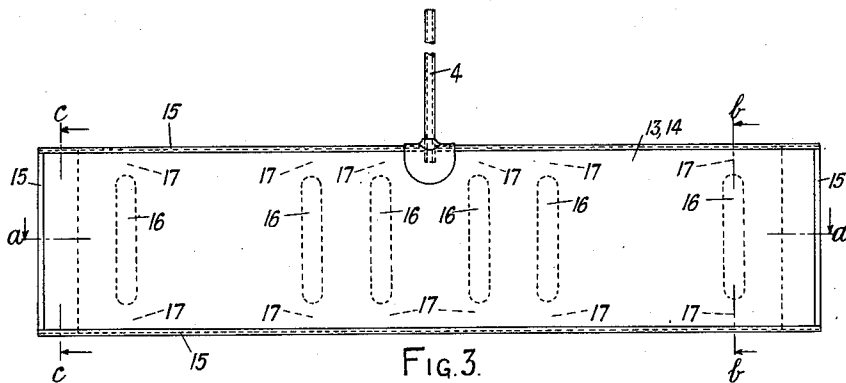
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Filed Sept. 26, 1933

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,019,086

BUOYANT CLOTHING

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Application September 26, 1933, Serial No. 691,066
In Great Britain October 6, 1932

1 Claim. (Cl. 9—20)

This invention relates to buoyant clothing, as, for example, bathing suits or beach suits and seamen's garments, of the type formed with an inner pocket or pockets accommodating a concealed inflatable air container.

According to a primary feature of the invention part of the fabric of the garment is formed of two separable plies the cell or space between which constitutes a pocket; that is to say, in the production of the fabric the web is locally formed in two planes of half thickness each merging into the single ply of full thickness of the remainder of the fabric, instead of attaching a separate pocket to the suit.

The pocket or pockets is or are desirably positioned to effect distribution of the buoyancy between the neck and the waist line.

The inflatable air container accommodated in the pocket is suitably formed as a belt which will fit around the chest of the wearer, the ends of the belt being advantageously joined by elastic of a length depending on the chest measurements of the wearer.

In order to effect optimum local distribution of the buoyancy, the belt is constructed to present a plurality of intercommunicating compartments of different capacities, the compartments of the largest capacity being located where buoyancy is most wanted, i. e., under the armpits, while other compartments may be so positioned and shaped as to conform with the contour of the wearer's body. For example, for a ladies' bathing suit or beach suit compartments may be shaped to support the breasts on both sides.

A preferred form of belt comprises two rubber panels formed by two sheets or by one sheet folded over, and joined along the edges and also joined along local transverse strip-areas by flexible strips which stop short of the longitudinal edges of the panels so as to afford ports permitting intercommunication of the compartments formed between the strips, as is important in securing the requisite buoyancy for the different methods of swimming and for floating. For example, small compartments may be disposed near each end of the belt, adjoining larger compartments, between which latter may be located a central compartment and two small side compartments.

One compartment, preferably the central compartment, is provided with a mouthpiece for use in inflating the belt.

The strips in question constitute stiffening strips distributed at points where it is required

to give support to the wearer's body; the intermediate compartments furnishing the requisite buoyancy.

A bathing suit of knitted fabric in accordance with the invention and fitted with an inflatable container or belt is illustrated in the accompanying drawings in which Fig. 1 is a front elevation, the container being deflated, and Fig. 2 a fragmentary section on the line *a—*a** of Fig. 1, the container being inflated, Fig. 3 is an elevation of the inflatable air container, Fig. 4 a horizontal section on the line *a—*a** of Fig. 3, and Figs. 5 and 6 transverse sections on the lines *b—*b** and *c—*c**, respectively, of Fig. 3, the container being shown in inflated condition.

As shown, there is provided in the body fabric of the suit above the waist belt 1 an annular pocket 2 accommodating the inflatable container 3 provided with a mouth piece 4 concealed normally within an auxiliary pocket 5 formed for easy access within the front of the fabric adjacent to the neck opening 6.

The pocket 2 is contained between separable outer and inner plies 7, 8 respectively, of the suit fabric merging into the single ply fabric at 9 adjacent to the waist belt 1 and at 10 below the level of the armholes 11 of the suit.

To form the pocket, in weaving or knitting the suit fabric the parts constituting the plies 7 and 8 are made of half thickness, the remainder of the fabric being of full thickness.

As is understood, in use, the container 3 is inflated only when required and is normally concealed and inconspicuous.

For suits for juvenile use inflatable containers may be located in pockets formed in the shoulder straps 12 of the suit.

As shown in Figs. 3 to 6, the air container is formed as a belt comprising two panels 13, 14 of rubber sheeting joined along the marginal edges by U-shaped binding strips 15 and joined along transverse local strip-areas by flexible strips 16 which stop short of the longitudinal edges of the belt and which divide the belt into compartments communicating with one another by way of ports 17 and including a front central compartment 18, compartments 19 one on each side of the compartment 18, large capacity compartments 20 adjoining the compartments 19, and compartments 21 adjoining the compartments 20.

The compartments 18—21 are so relatively spaced that, when the belt is fitted in the pocket or annular space provided in the bathing suit

with the compartments 18, 19 to the front, the large capacity compartments 20 are adapted to come under the armpits of the wearer.

What I claim is:—

5 A one-piece seamless buoyant garment of single-ply knitted textile fabric, having a waist belt, and formed above said waist belt with a pocket contained between separable plies each of one half the thickness of the fabric, and an inflat-

able belt accommodated in said pocket, said inflatable belt comprising two rubber panels joined together along their edges, and vertical flexible supporting strips joining the adjacent faces of said panels along locally distributed strip areas, said strips stopping short of the longitudinal edges of said inflatable belt and affording between them, intercommunicating compartments. 5

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