Jan. 3, 1956 J. H. CLARKE ET AL 2,728,916

PROTECTIVE CLOTHING

Filed July 3, 1953 2 Sheets-Sheet 1

FIG. 1.

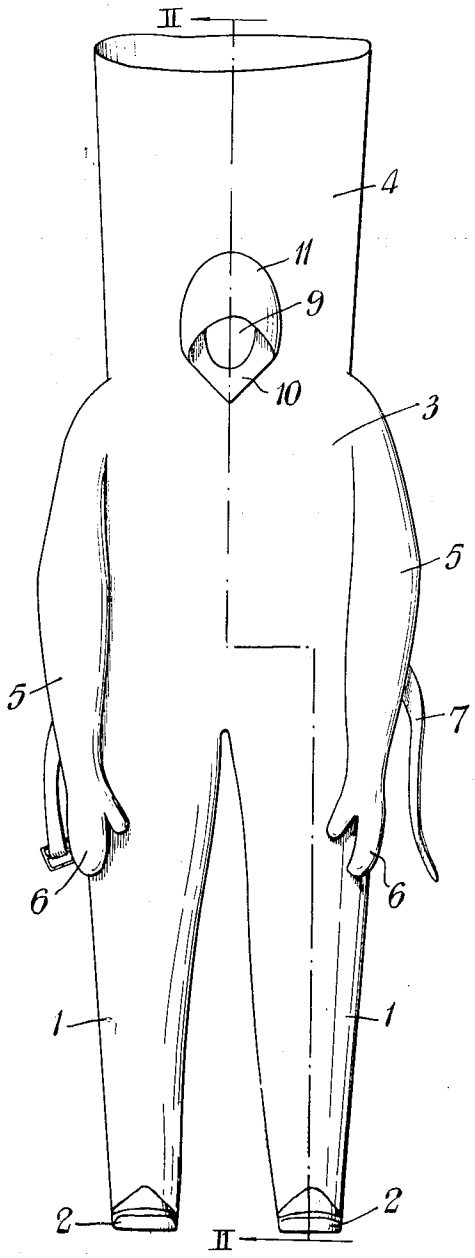
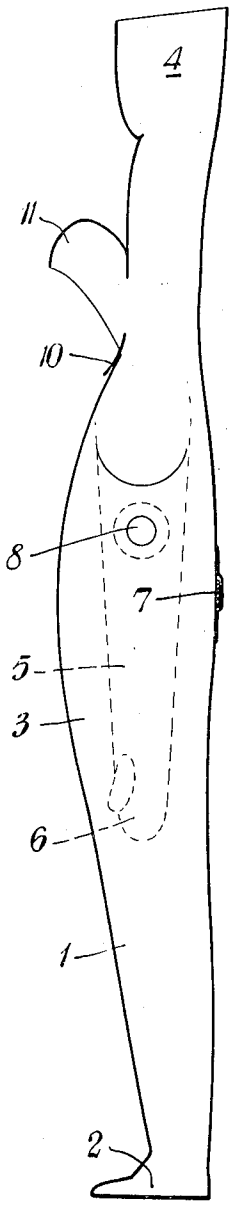


FIG. 2.



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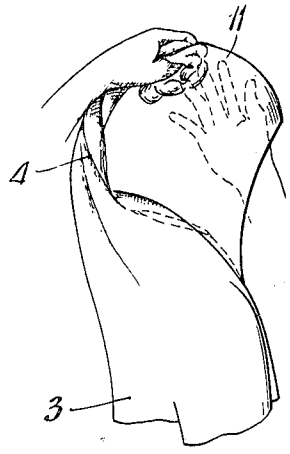


FIG. 3.

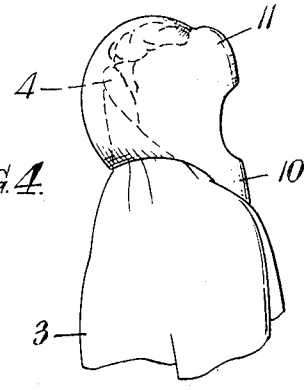


FIG. 4.

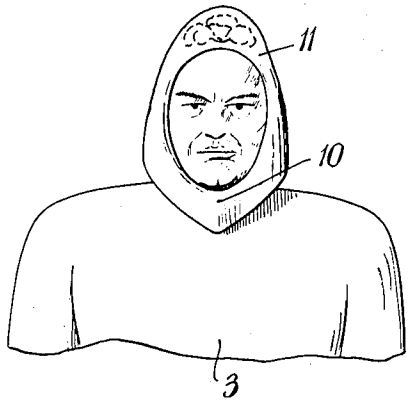


FIG. 5.

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PROTECTIVE CLOTHING

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Application July 3, 1953, Serial No. 365,872

Claims priority, application Great Britain June 5, 1953

3 Claims. (Cl. 2—82)

This invention relates to protective clothing and is concerned with clothing for protecting the wearer against the effects of being immersed in water or against contact with other liquids or gases. Such clothing is sometimes termed "an immersion suit."

According to the present invention there is provided a protective garment formed after the manner of a bag and adapted to receive the body of a wearer in such a way that the mouth of the bag extends above the head of the wearer, said bag having an opening through which the face of the wearer may protrude and a cap formed in, or attached to, the bag above the opening, the arrangement being such that the mouth of the bag can be gripped beneath the cap when the cap is positioned on the head of the wearer, whereby the bag may be effectively sealed.

For a better understanding of the invention reference will now be made to the accompanying drawings, in which—

Figure 1 is a front view of an immersion suit,

Figure 2 is a diagrammatic section on the line II—II of Figure 1, and

Figures 3, 4 and 5 are perspective views illustrating the positioning of the upper part of the immersion suit of Figures 1 and 2 on a wearer.

Referring first to Figures 1 and 2, these show an immersion suit formed from an open-mouthed bag having a depth greater than the height of the intended wearer. The bag is shaped to provide leg portions **1** having feet portions **2**, a main body portion **3** which is continued into an open mouth portion **4**, and arm portions **5** having glove portions **6**. A belt **7** is attached to the body portion **3**, which belt may be tightened around the body of a wearer. Underneath the armpits on each side of the body portion **3**, breathers **8** are provided, one of which may be seen in Figure 2. At a location below the mouth portion **4**, there is an opening **9** in the front of the body portion **3**. This opening **9** is bordered by an annular rubber strip **10** adapted to bear upon the face of the user and to leave free his eyes, nose and mouth, the strip **10** being formed integrally with a rubber cap **11**, shaped to fit closely over the head of a wearer.

In the embodiment described, the main body portion **3**, the leg portions **1** and the arm portions **5**, are made of two ply rubberised fabric, the mouth portion **4** of single ply fabric, the feet portions **2** of reinforced thick rubber sheet and the breathers **8** of Shirland treated fabric. These breathers may be formed by placing patches of material upon holes provided therefor in the suit and act as valves. They allow air to pass there-through but when wetted by immersion will prevent passage of fluid through them.

When it is intended to employ the immersion suit described above, the wearer enters through the mouth **4** of the bag and draws the suit over his arms, legs and body until the mouth of the bag is well above his head. The cap **11** is then turned inside out, (i. e. the portion

shown in Figures 1, 2 and 3), the chin rested against the lower part of the strip **10** and the mouth portion **4** gathered up in one hand and placed on top of the cap **11** (see Figure 3). The mouth portion **4** is then gripped with the other hand through the material of the cap **11** (see Figure 3) which is then turned right-side-out and simultaneously drawn over the head of the wearer so that the gathered-up mouth is located inside the cap, which grips tightly upon the head of the wearer (see Figure 4). The suit is thus effectively sealed and the cap is in position as will be apparent from Figure 5, and it will be appreciated that the air trapped within the suit serves to impart bouyancy to the wearer when immersed in water. The wearer can also allow air to escape from the suit by manual adjustment of the strip **10**.

We claim:

1. A protective garment formed after the manner of a bag having a main body portion of sufficient height to receive the body of a wearer, a minor body portion above the main body portion and having the mouth of the bag at the free extremity thereof, the main body portion having an opening adjacent the minor body portion through which the face of a wearer may protrude, and a cap of resilient material, a marginal portion in said cap secured to the main body portion above the opening therein, a substantially part-spherical portion in said cap extending from the marginal portion, the free edges of the part-spherical portion being directed away from the adjacent part of the main body portion when the cap is inside-out and being adapted to grip over the head of a wearer in the use of the protective garment when the cap is right side out, with the minor body portion held between the cap and the head.

2. A protective garment comprising a bag-like container, a mouth at one end of the latter to permit entry of a wearer feet first, a face engaging margin around a face opening formed in the container at a location spaced below said mouth, and a resilient cap connected at least to the upper part of said margin and lying exterior to said container and below said mouth, whereby a wearer can enter the garment, feet first, through said mouth and after bringing the face engaging margin into position can turn the cap inside out to engage his head with the mouth beneath the cap, thereby effectively closing said mouth.

3. A protective garment comprising a bag-like container, a mouth at one end of said container for entry of the body of a wearer feet first, leg portions formed in said container at the end thereof opposite said mouth, arm portions formed in said container intermediate its ends, a face engaging margin around a face opening formed in said container above said arm portions and below said mouth, and a resilient cap connected at least to the upper part of said margin and lying exterior to said container, whereby a wearer can enter the garment, feet first, through said mouth and after bringing the face engaging margin into position can turn the cap inside out to engage his head whilst bringing the end of the container having said mouth beneath the cap, thereby effectively closing said mouth.

References Cited in the file of this patent

UNITED STATES PATENTS

1,291,648	Lowy	June 14, 1919
1,401,677	Dade	Dec. 27, 1921
1,472,330	Fry	Oct. 30, 1923
2,046,565	Lawton et al.	July 7, 1936
2,051,437	Dorn	Aug. 18, 1936
2,079,980	Anders	May 11, 1937
2,306,196	Temple	Dec. 22, 1942