No. 693,996. Patented Feb. 25, 1902.

H. M. BRAND.

LIFE SAVING SUIT.

(Application filed Oct. 4, 1901.)

(No Model.)

Fig. 1

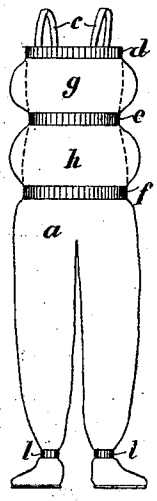


Fig. 2

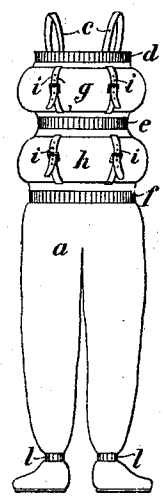


Fig. 3

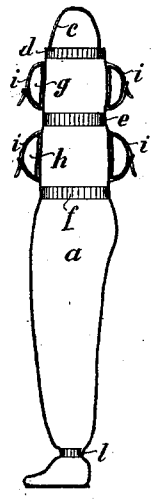


Fig. 4

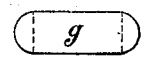


Fig. 5

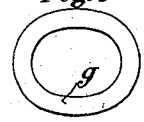


Fig. 6

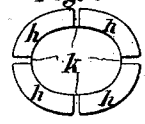


Fig. 7

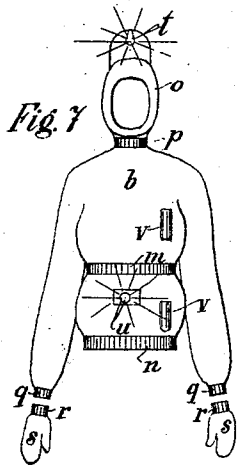


Fig. 9.

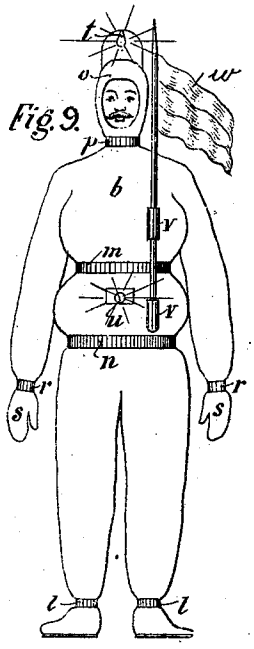
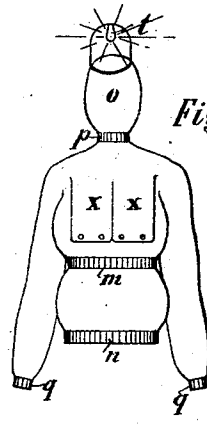


Fig. 8



Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HERRMAN MARTIN BRAND, OF PORTO ALEGRE, BRAZIL.

LIFE-SAVING SUIT.

SPECIFICATION forming part of Letters Patent No. 693,996, dated February 25, 1902.

Application filed October 4, 1901. Serial No. 77,539. (No model.)

To all whom it may concern:

Be it known that I, HERRMAN MARTIN BRAND, a citizen of Brazil, residing at Porto Alegre, Brazil, have invented certain new and useful Improvements in Life-Saving Suits; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of the present invention is a safety-suit which in case of a shipwreck not only protects the user against drowning, but also keeps the body dry and prevents the latter from becoming numbed or frozen.

In the drawings, Figure 1 is a front view of the trousers. Fig. 2 is a modified construction of the same. Fig. 3 is a vertical longitudinal section through the latter. Figs. 4 and 5 show a float-ring in plan and elevation. Fig. 6 is a plan view of a modified float-ring. Fig. 7 is the coat of the suit with hood and gloves in front elevation. Fig. 8 is a back view of the same, and Fig. 9 a front view of a man dressed in the complete suit according to the present invention.

The suit consists of two main parts—*i. e.*, the trousers *a* and coat *b*. The trousers extend right up to the armpits and are held in position by braces or the like. Further, the part of the trousers which covers the body comprises three elastic rings *d e f*, between which are arranged pneumatic rings *g h*. The latter serve as floats, while the elastic bands *d e f* insure a good fit of the suit—*i. e.*, the proper position of the floats relatively to the body—and prevent entrance of water within the clothing. The pneumatic rings can be integral with or made in the material of the trousers, or they can form separate parts, in which case they are connected to the trousers, Figs. 2 and 3, by means of straps *i* or the like. The floats need not consist of one ring—*i. e.*, of a single body—but they can be made of separate pads or air-cushions *h*, as shown in Fig. 6, which at *k* are connected, if desired, by an elastic band or otherwise. At the ankles elastic bands *l* are provided. The soles of the footpieces are reinforced in order to avoid damage. The coat *b* has on its body part also two annular elastic bands *m n*, which when slipped over the trousers coincide with the bands *e f* of the latter. The coat is further provided with a hood *o*, the neck part of which is provided with an elastic band *p*, and in the same manner the sleeves are provided at the wrists with elastic bands *q*. It is obvious that this elastic fitting prevents the water from entering the suit and also lessens the risk of the wearer becoming numbed or frozen, as he can, owing to the elasticity of the bands, easily slip on the suit over his ordinary clothes. In order to protect the hands against the cold, gloves *s* are provided and furnished with elastic bands *r*. Upon the hood is mounted, preferably, an electric lamp *t* for facilitating the resue of the shipwrecked man at night. In the same manner an electric lamp *u* can be arranged on the body part of the coat in order to frighten large fishes away. Moreover, means can be provided for securing a flag *w*, the stem of which can also be used as a protecting means against large fish. On the back of the coat may be arranged pockets *x* for preserving provisions. It is obvious that a man thus equipped can for a long time be sustained and kept alive, whereby his rescue is facilitated.

What I claim is—

1. In a life-saving suit, the combination, with waterproof trousers extending up to the armpits and provided around the body with annular elastic bands, between which annular floats are inserted, of a waterproof coat with elastic rings around the body coinciding with the elastic rings of the trousers.

2. In a life-saving suit, the combination, with waterproof trousers extending up to the armpits, of elastic rings around the body part, between which are inserted detachable annular floats.

3. In a life-saving suit, the combination, with trousers having a plurality of elastic bands around their body portion, of floats secured between the said bands, substantially as set forth.

4. In a life-saving suit, the combination, with trousers having a plurality of elastic bands around their body portion, of pneumatic floats, and fastening devices securing said floats to the body portion of the trousers between the said bands, substantially as set forth.

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

HERRMAN MARTIN BRAND.

Witnesses:

FELIX HENRIQUE KESSLER,

CARLOS GUILHERM ALLENBERND.