April 2, 1940. J. C. MYERS 2,195,736

LIFE-SAVING SUIT

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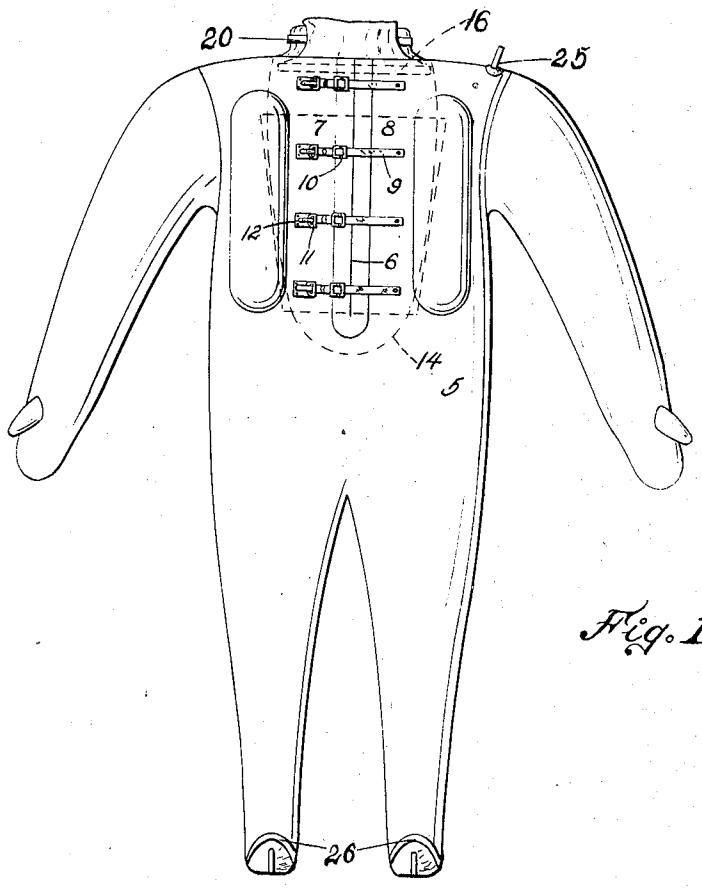


Fig. 1

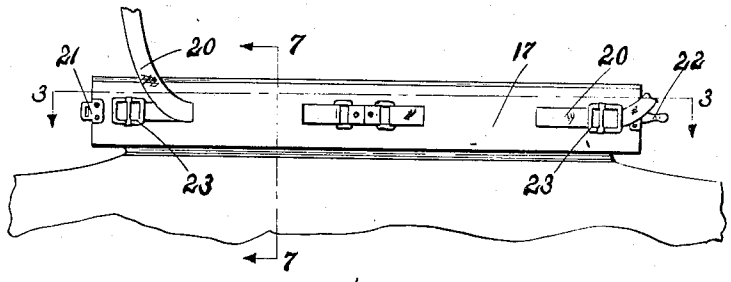


Fig. 2

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Fig. 3

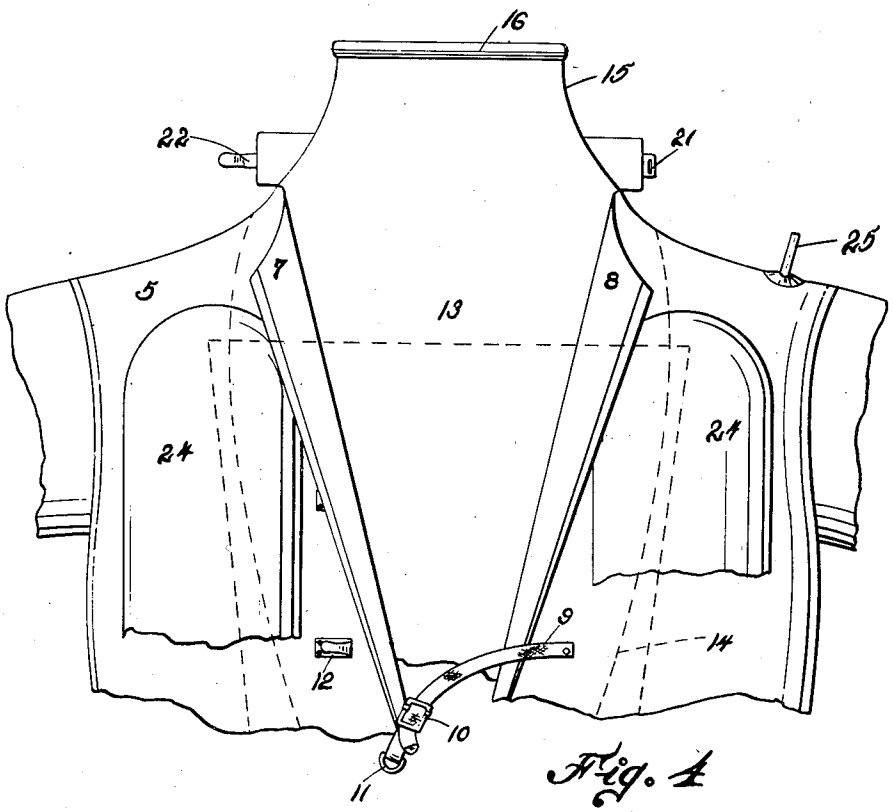


Fig. 4

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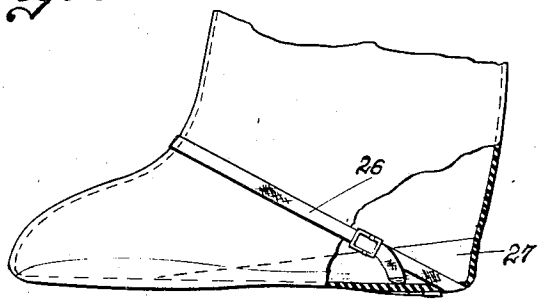
Attorneys

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LIFE-SAVING SUIT

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Fig. 5



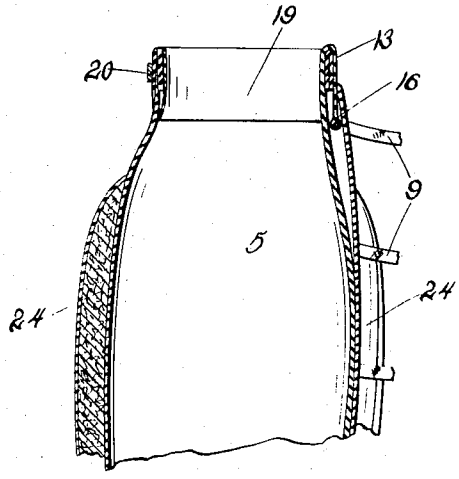


Fig. 6

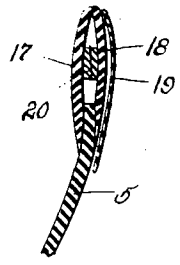


Fig. 7

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UNITED STATES PATENT OFFICE

2,195,736

LIFE-SAVING SUIT

Jeremiah C. Myers, Washington, D. C.

Application October 22, 1938, Serial No. 236,485

5 Claims. (Cl. 9—20)

This invention relates to life saving suits, and it has for its object to provide an improved device of this character, constructed in such manner as to envelop the entire person of the user, except for the head, and to support the user in the water, said suit being made of rubber or like waterproof material adapted to keep the water out of contact with the user for protection against cold. Means are also provided for excluding water about the neck, the only open portion, so that no water may enter the suit.

I am aware of the fact that it has heretofore been proposed to provide life saving suits of the general character of that so far described. However, as this description proceeds it will be seen that the suit of the present invention provides novel features of construction by virtue of which the suit is more easily donned, may be made to conform more closely to the figure of the wearer, and will be held more securely upon the person of the wearer, so that if a small person should have to don a large suit, there will not be the tendency for the whole suit to float upwardly over the head of the wearer such as would be the case if the suit were to fit loosely all around.

In the accompanying drawings, wherein like numerals designate corresponding parts throughout the several figures:

Figure 1 is a front elevation of a life saving suit constructed in accordance with the invention and showing the same in closed position;

Fig. 2 is a rear view of the collar portion of the suit;

Fig. 3 is a horizontal sectional view through the collar on line 3—3 of Fig. 2;

Fig. 4 is a fragmentary view of the upper portion of the suit, showing the lapels open and illustrating the internal bib hereinafter described;

Fig. 5 is a view in side elevation of the foot portion of the suit with the heel thereof broken away;

Fig. 6 is a vertical sectional view through the suit, and

Fig. 7 is a vertical sectional view through the collar on line 7—7 of Fig. 2.

Referring to the drawings, 5 designates the body of the suit, which is split vertically at 6 to provide the two lapel portions 7 and 8. Straps 9 are attached to the lapel 8 and are provided with adjusting buckles 10. These straps include rings 11 at their ends, which are adapted to engage over hooks 12. After the rings have engaged over the hooks, the lapels may be drawn forcibly toward each other in a snug fit.

By the use of adjusting straps at the point indicated, a very considerable constricting action may be imparted to the suit to bind it about a small person where the suit is too large for the person who is using it. I am aware of the fact that it is customary to provide the vertically split portion at the front top of the suit in devices of this character, but heretofore these have been provided with ordinary snap fastenings which provided no lateral adjustment or material constricting action of the suit at the point indicated.

Upon the contrary, only one adjustment was possible, and if the suit being worn did not happen to fit the person who got hold of it in the excitement of a marine disaster, there was a tendency for the whole suit to float upwardly, choking the wearer. In some instances, people have been seriously injured by jumping overboard from ships while wearing swimming appliances too loosely fitted and too large for them. Instances have been known where the breasts of women have been torn off by the tendency of the cork life preserver, for example, to resist immersion while the body of the wearer tends to continue its downward movement through the life preserver.

To prevent the entry of water at the place where the suit is vertically split, at 6, an internal bib 13, of soft rubber, is cemented, as indicated by the dotted line 14, to the inside of the suit 5. This bib tapers at the top, as indicated at 15, and is intended to be passed upwardly through the collar and then downwardly and outwardly over the collar in a manner hereinafter set forth.

The top edge of the bib is provided with a stiffening strip 16. This may be a tube of stout and stiff rubber, or it may be a rod of the same, and it serves an important function, as will be presently described. The collar of the suit consists of two main plies 17 and 18, which are cemented to the body 5 of the suit (see Fig. 7), and at the inner side of the collar there is provided a soft rubber web 19, having its lower edge free and its upper edge cemented to the top of the collar.

The spacing of the webs 17 and 18 from each other provides a pocket through which tightening straps 20 are threaded. (See Fig. 2.) The function of these straps is to provide means for pulling the collar tight about the neck of the wearer to thus compress the soft rubber web 19 firmly enough about the neck of the wearer to exclude water. The plies 17 and 18 are relatively stiff and yield the requisite strength required in an article of this sort, and yet by virtue of the straps 20, as described, this collar may be caused to func-

tion as the constricting element by which the soft rubber web is caused to exercise its water-excluding function.

The front of the collar (see Fig. 3) is provided with a conventional loop and swinging lever clasp consisting of the loop 21 and swinging lever 22 constituting a preliminary fastener. When donning the suit, the wearer grasps the stiffening strip 16 and pulls the top of the bib upwardly above the level of the collar with one hand and then snaps the preliminary fastener 21, 22 together with the other hand. He then draws upon the straps 20 in the collar to whatever extent may be necessary to tighten the collar about the neck of the user. The adjusting buckles 23 are fast to the outer ply of the collar, and so the straps may be held in the position to which they are adjusted.

Heretofore, in devices of this character, it has been very difficult for the person donning the suit to keep the top of the bib from slipping back down through the collar during the tightening of the latter. By the provision of the stiffening rod or rib 16 upon the upper end of the bib, this difficulty is avoided, because after the preliminary clasp 21, 22 at the front of the collar has been connected to loosely secure the collar, the rod cannot pass back through the collar while both hands of the user are left free to draw upon the straps 20.

After the collar has been suitably tightened, the top portion of the bib is folded outwardly and downwardly over the collar (see Figs. 2 and 6), and the ends of the flexible rod or strip 16 are engaged beneath the shoulder portions of the garment. When the lapels are drawn toward each other by the straps 9, the shoulder portions of the garment are caused to move toward each other so that they bind firmly over the ends of the rod 16, and the bib cannot thereafter by any means become dislodged, even in the roughest seas. The making of the rod 16 of a stiff rubber tube renders this element stiff enough to hold the end of the bib down, as described, by the engagement of said rod beneath the shoulder portions of the garment, while at the same time, this element is not stiff enough to be objectionably uncomfortable to the wearer.

Any desired means may be provided for rendering the suit buoyant. It is common to provide pockets filled with air or bucyant material such as kapok and the like. I have indicated such material at 24, and the position of these buoyant elements may be varied at will. A rubber tube is provided at 25 and serves to let the air out of the suit so that a snug fit may be had when the straps 9 are drawn upon.

The foot portion of the garment must, of necessity, be of pretty good size, because these suits are usually donned by wearers having their shoes on. In order to make it possible for the wearer to get his shoe into the leg portion of the garment and still have a reasonably snug fit after he gets it there, straps 26 are provided across the instep and secured at the heel so that a drawing action may be exerted upon the instep.

To insure that the wearer will float upright in the water, weights 27 are provided in the heel portions of the garment, and by referring to Fig. 5 it will be seen that these weights are of wedge shape; that is to say, they are thicker at their rear ends than at their forward ends. Previously known devices of this character have been provided with weights extending all the way across the sole of the foot, and this has a tendency to pull the toes downward and to tip the wearer forward to an undesirable degree.

It is to be understood that the invention is not limited to the precise construction set forth, but that it includes within its purview whatever changes may fairly come within either the terms or the spirit of the appended claims.

Having described my invention, what I claim is:

1. A suit of the character described, formed of waterproof material and of dimensions adapted to completely embrace the entire person of the user except the head, said suit being split at its upper front portion to provide lapels, fastenings for securing said lapel portions together, a collar open at the front, secured to the upper portion of the suit, two separate fastening means upon said collar, one of a non-drawing nature, constituting a preliminary fastener, and the other of a drawing nature adapted to constrict the collar when drawn upon, a bib-like web having water-tight connection at its lower and side portions with the body of the suit, said web lying rearwardly of said split portion and excluding water at that point, the upper end of the web being of sufficient length to extend upwardly inside of the collar and to be then folded downwardly and outwardly over the outside of said collar, a laterally extending flexible stiffening strip upon the extreme end of the bib of a length so that its ends may be tucked beneath the shoulder portions of the suit to prevent reverse movement of the web through the collar.

2. A life saving suit of the character described, made of waterproof material and shaped to envelop the entire person of the user except the head, said suit being split at its upper front portion to provide the lapels as described, a soft rubber bib attached to the interior of the suit rearwardly of said split portion and having water-tight engagement with the suit at its bottom and sides, means for drawing the edges of the lapels forcibly toward each other to close the open front of the suit and to constrict the upper portion of the suit and draw it together and draw the shoulder portions together, a collar upon the suit, means for constricting said collar, the upper end of said bib being free and of a length to extend upwardly inside of said collar, then downwardly over the outside of said collar to a point below said collar, and a flexible stiffening rod upon the end of said free portion of the bib, of a length to engage beneath the shoulder portions of the garment and to be held by said shoulder portions when said portions are drawn together by the action of the drawing means of the lapels.

3. A structure as recited in claim 2 wherein the constricting means for the collar comprises an initial clasping means at the end and a supplemental drawing means extending entirely around the collar.

4. A structure as recited in claim 2 wherein the collar constricting means comprises an initial clasping means at the ends of the collar and a supplemental drawing means extending entirely around the collar, consisting of straps threaded through the collar.

5. A suit of the character described consisting of waterproof material and of dimensions adapted to completely embrace the person of the wearer except the head, a relatively stiff rubber collar, open at the front only, constituting an in-

tegral part of said suit, a web of soft rubber that is much thinner than the material of the collar, said soft rubber web being united with the stiff collar along the upper inner edge only of the latter, leaving the remainder of said thin rubber web free to yield in all directions and to seek a waterproof seating around the neck of the wearer as the stiff collar is constricted about the wearer's neck, and constricting means upon the exterior of the stiff rubber collar.

his
JEREMIAH C. × MYERS.
mark

Witnesses to mark:
MARY C. CAMPBELL,
HERBERT M. CAMPBELL.