March 5, 1929. C. E. JOURNEY 1,704,197

LIFE SAVING DEVICE

Filed May 6, 1927

Fig. 1.

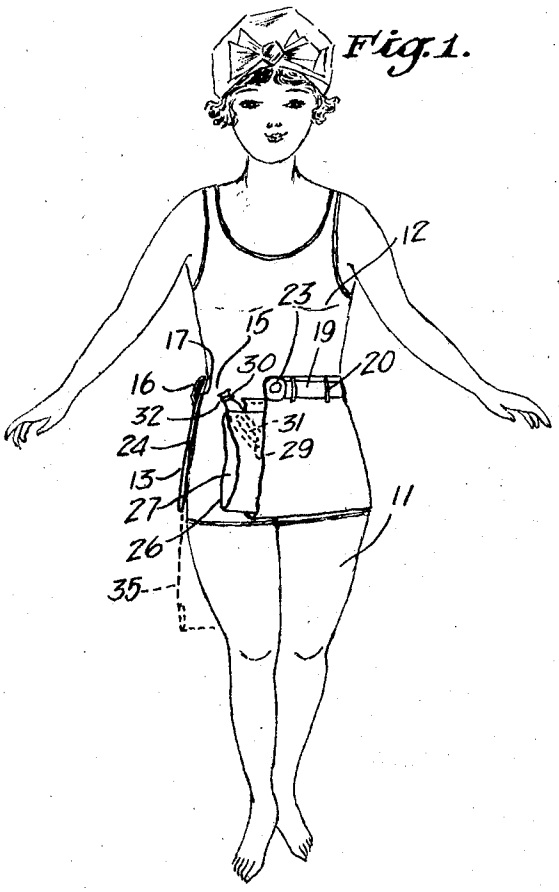


Fig. 2.

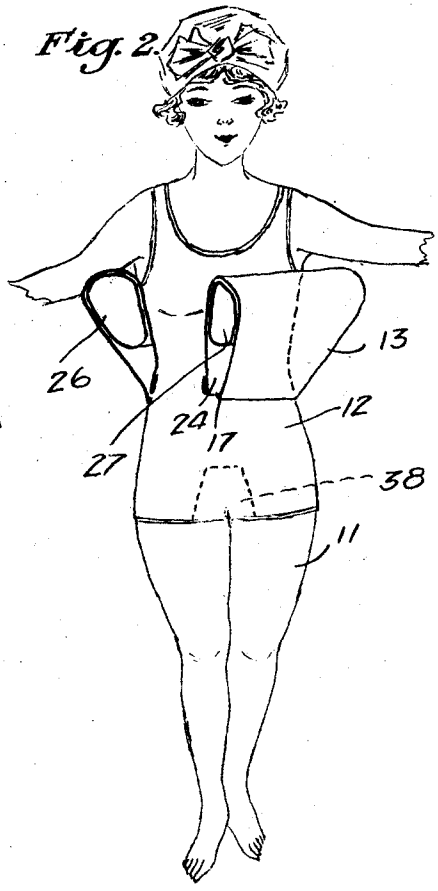


Fig. 5.

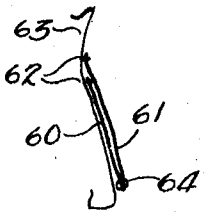


Fig. 4.

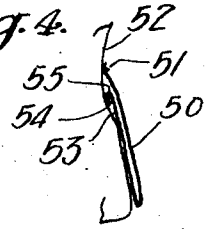
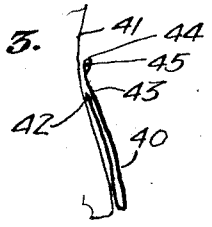


Fig. 3.



INVENTOR

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Patented Mar. 5, 1929. 1,704,197

UNITED STATES PATENT OFFICE.

CLARENCE E. JOURNEY, OF LOS ANGELES, CALIFORNIA.

LIFE-SAVING DEVICE.

Application filed May 6, 1927. Serial No. 189,433.

This application is substituted for my previous application concerning the same subject matter, filed Jan. 15, 1925, Serial No. 2,521.

This invention relates to life saving devices and it relates particularly to a device of the character especially suited for incorporation in a bathing suit.

The causes of deaths by drowning are numerous. Many persons are drowned due to muscular contractions or cramps which paralyze them, others are drowned due to overexertion which leaves them unable to reach safety, and some are drowned in undertow or riptide. Altho the sources of drowining are numerous, they may all be reduced to one fundamental cause, and that is inability to maintain one's self on the surface of the water. It is obvious that no person can drown as long as he remains on the surface of the water. A great percentage of drownings could be prevented if the drowning person had means for keeping on the water when he is overcome with muscular contraction, becomes exhausted, is caught by undertow or is subject to any cause of drowning.

There are now in use various types of equipment which will keep a person afloat, but these devices have undesirable features which my invention avoids. Of the present equipment some are permanent floats such as cork filled rings and jackets, and others are arranged to be inflated through a valved tube which may be applied to the mouth of the wearer. The permanent floats are conspicuous and cumbersome, and therefore, are seldom worn by bathers. The inflatable type cannot be conveniently inflated by persons in the water, and for a person to inflate one of these devices while under water is absolutely impossible, and even though the drowning person should reach the surface, inflation of such a device is practically impossible.

It is an object of my invention to provide a life saving device which may be worn by a bather at all times, but which will not interfere with his activities under usual conditions. My invention is of such a character that if disposed on the person in inert condition under usual circumstances it may be operated very readily to transform from inert position into active position. When in active position my organization serves as a buoy to maintain the possessor on the surface of the water. The specific construction of my invention consists of an air-tight bag and means for inflating the bag. The bag may be of convenient character or size, it may be a continuous annular bag or an elongated shape, and it may be either made from an elastic or a non-elastic material. The inflating means may likewise be of any effective character. In its preferred form, however, it consists of a cartridge containing a permanent compressed gas. The cartridge is arranged for easy breaking and when it is desired to inflate the bag, the cartridge is broken. This breakage permits the compressed gas to expand, filling the bag and transforming it into a buoy.

It is an object of this invention to provide a life preserver which is protected from injury by the bathing suit.

It is also an object of the invention to provide an organization in which a portion of a bathing suit is adapted to completely enclose the bag of the preserver. In the preferred form of my invention, I enclose the bag inside the skirt of the bathing suit. I conveniently accomplish this by making a skirt which is substantially twice the length of an ordinary skirt. The upper end of the skirt is sewed to the suit at the usual place and the lower edge is telescoped back upon the skirt, being brought into a position adjacent to the upper edge. An annular pocket is thereby provided in which the bag is placed. The bag is thus entirely protected from injury by the skirt of the suit. One feature of this arrangement is that the presence of a life preserver is not readily noticed by an observer. Various expedients may be utilized for keeping the lower end of the skirt in position adjacent to the upper or sewed end, such as elastics or draw strings. It is, however, more practical to provide the loose end of the skirt with loops and to retain this end in place by the use of a belt. It is common practice at the present time for bathers to wear belts solely for adding to appearance. In my invention the belt has the utility of positioning the skirt as well as contributing to the attractiveness of the bathing suit.

It is a further object of the invention to provide a suit of the character mentioned which will automatically move into position below the armpits when inflated.

It is also an object of my invention to provide a life saving suit in which the bag is readily removable.

Other objects and advantages of my invention will be presented in the ensuing description.

Referring to the drawing in which I illustrate various forms of my invention:

Fig. 1 is a view of a bather wearing a suit having the features of my invention, a portion of the skirt being broken away to show the construction thereof. The life saving device in this view is shown in collapsed normal position.

Fig. 2 is a view similar to Fig. 1, but showing the life saving device in inflated position.

Figs. 3, 4, and 5 are fragmentary views each showing a different form of my invention.

In Figs. 1 and 2, I show a bather 11, wearing a bathing suit 12 embodying the features of my invention. The suit 12 may be of any design. A skirt 13 is sewed to the body of the bathing suit 12 at the waist line 15. The skirt 13 is tubular in shape and is substantially twice the length of an ordinary skirt. The skirt is folded back upon itself, that is, the lower half is telescoped over the upper half so that the free end 16 is positioned along side the sewed end 17 of the skirt. When the skirt is thus folded, the effective length is the same as an ordinary skirt. The free end 16 of the skirt is preferably held in place by a belt 19. The free end of the skirt is supplied with a series of loops which are sewed on the outer face of this part of the skirt. The belt 19 is extended through the loops 20 and is adjusted by a buckle 23 to the proper size. An annular channel 24 is formed between the thicknesses of the skirt 13 when the skirt is folded, and in this channel I place a bag 26. The bag presents a closed annular chamber 27 and is impervious to gas. A cartridge pocket 29 is attached to the bag 27 so that an open end extends to the exterior. A cartridge 31 is placed inside the cartridge pocket thru the open end 30 which is afterward closed by a suitable clip 32. The cartridge 31 is preferably in the form of a shell containing compressed gas. The shell is prepared so that it may be easily broken to permit the gas to escape into the chamber 27 of the bag 26, the gas expanding and filling the bag as will be explained later.

In Fig. 1, the bag is in collapsed position and the skirt 13 is in the position shown in this figure, which position being that of an ordinary skirt. The skirt completely surrounds the bag 26 in such a manner that the bag's presence is not perceived. The weight of the bag is very small, yet having the necessary strength and it is no way bunglesome. The belt 19 adds to the appearance of the suit as well as retains the free end 16 of the skirt in place. The wearing of a belt does not introduce a new fad as it is common practice to wear a belt to improve the appearance of a bathing suit.

In Fig. 2 I show the bag and skirt in a position conformed when the bag is inflated. To inflate the bag 26, the cartridge 31 is broken, thus allowing the gas to enter the chamber 27 and to expand the bag 26. Skirt and bag automatically move into the position shown in Fig. 2. First, because the bag tends to move toward the smaller diameter of the body, and second, because it is hinged upon the seam 17 and can only swing in one direction. The skirt protects the bag from injury since it entirely encloses the bag. Excessive dilation is also resisted by the skirt and the bag is held in substantially a flat plane thereby. Without the skirt, all of the weight would be placed on the bag at two points, i. e. under the arms and the bag would tend to fold and not hold the bather as far out of the water as does my arrangement in which the weight is distributed around the circumference.

When installing the bag 26, the skirt is extended as indicated by the dotted lines 35 of Fig. 1. The bag is placed over the upper part of the skirt and the lower portion is brought into the position indicated by the full lines of Fig. 1. The belt is then extended through the loops and properly adjusted. The unique skirt arrangement renders the bag conveniently accessible for inspection and for removal.

An auxiliary skirt or apron is sewed to the trunk portion of the suit 12 as shown. This apron 38 is visible when the skirt 13 is positioned as in Fig. 2, said apron 38 improving the appearance of the suit.

In Fig. 3, I illustrate a skirt 40 which is sewed to a suit 41 at 42. The free end 43 of the skirt is provided with a seam 44 in which an elastic 45 is placed. The elastic 45 is invisible and retains the skirt in proper position.

The form of my invention shown in Fig. 4 has a skirt 50 which is sewed at 51 to a suit 52. The free end 53 of the skirt is folded inside the upper portion as shown and has a seam 54 through which a drawstring extends for retaining the free end in place.

In Fig. 5, my invention is in the form of a pair of skirts 60 and 61 which are sewed at 62 to a suit 63. The lower ends of the skirts 60 and 61 are provided with snaps or buttons which secure the lower ends together.

I have illustrated and described various forms of my invention, all of which embody the essential features thereof. It should be understood however, that alterations may be made thereon without departing from the spirit and scope of my invention, and I wish my invention interpreted solely by the appended claims.

I claim as my invention:

1. In a bathing suit, the combination of: a skirt, said skirt being sewed at one end to said suit, the free end of said skirt being telescoped back into adjacency with said sewed end, said skirt forming an annular bag receiving channel; a bag arranged in said bag receiving

channel; and means for retaining said free end of said skirt in place.

2. In a bathing suit, the combination of: a skirt, said skirt being sewed at one end to said suit, the free end of said skirt being telescoped back into adjacency with said sewed end, said skirt forming an annular bag receiving channel; a bag arranged in said bag receiving channel; and a belt for retaining said free end of said skirt in place.

3. In a bathing suit, the combination of: a skirt, said skirt being sewed at one end to said suit, the free end of said skirt being telescoped back into adjacency with said sewed end, said skirt forming an annular bag receiving channel; a bag arranged in said bag receiving channel; loops provided at the free end of said skirt; and a belt extending thru said loops for retaining said free end of said skirt in place.

4. In a bathing suit: a body covering portion of a material adapted to fit tightly to the body of the wearer so as not to interfere with swimming activity; a skirt forming a normal part of said bathing suit, secured at substantially the waist-line and depending downwardly therefrom, said skirt being also of material adapted to fit tightly to the body of the wearer and being formed with an inner layer and an outer layer so as to provide an annular pocket within said skirt; and a flat inflatable bag disposed within said pocket and normally fitting tightly the body of the wearer.

5. In a bathing suit: a body covering portion; a skirt forming a normal part of said bathing suit, secured at substantially the waist-line and depending downwardly therefrom, said skirt being of a material adapted to fit tightly to the body of the wearer so as not to interfere with swimming activity and being formed with an inner layer and an outer layer so as to provide an annular pocket within said skirt; a flat inflatable bag disposed within said pocket and normally fitting tightly the body of the wearer; and means for inflating said bag so as to form a float.

6. A life saver skirt for use with a bathing suit, consisting of an annular member having an inner layer and an outer layer of an elastic material adapted to adhere tightly to the hips of the wearer so as not to interfere with swimming activity and forming between said inner and outer layers an annular pocket, and an inflatable bag within said pocket adapted also to fit tightly to the body of the wearer.

7. A life saver skirt for use with a bathing suit, consisting of an annular member having an inner layer and an outer layer of an elastic material adapted to fit tightly to the hips of the wearer so as not to interfere with swimming activity and forming between said inner and outer layers an annular pocket, an inflatable bag within said pocket adapted also to fit tightly to the hips of the wearer, and manually actuated means within said pocket for inflating said bag.

Signed at Chicago in the county of Cook and State of Illinois, this 4th day of May, 1927.

CLARENCE E. JOURNEY.