

Sept. 21, 1926.

1,600,263

J. H. WILLIAMS

LIFE PRESERVER

Filed March 9, 1925

2 Sheets-Sheet 1

Fig. 1.

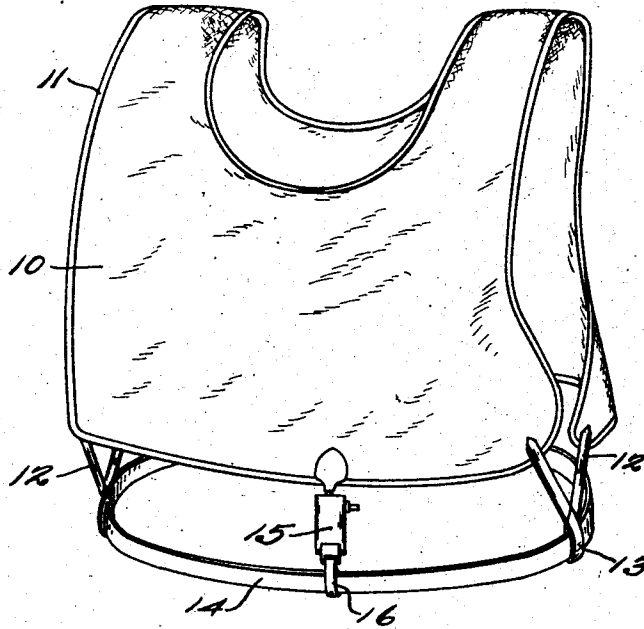
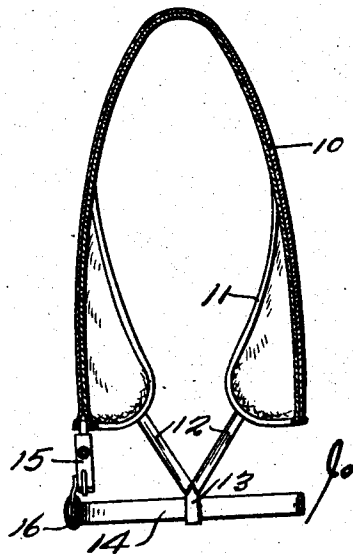


Fig. 2.



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Fig. 3.

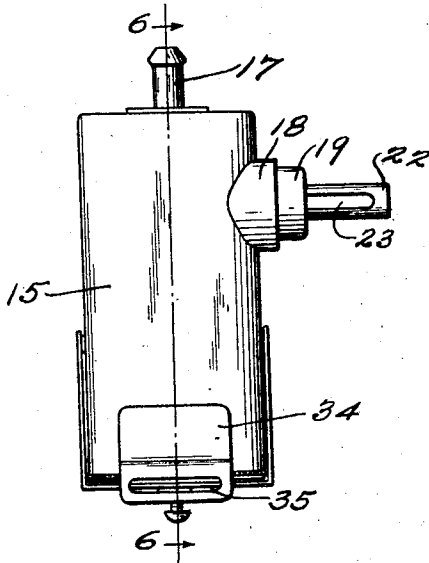


Fig. 4.

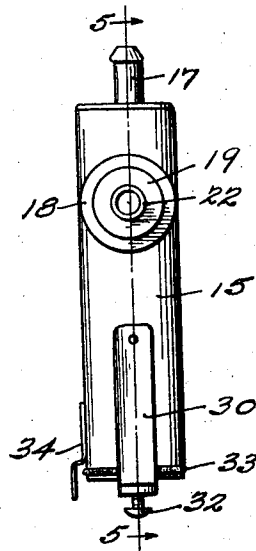


Fig. 5.

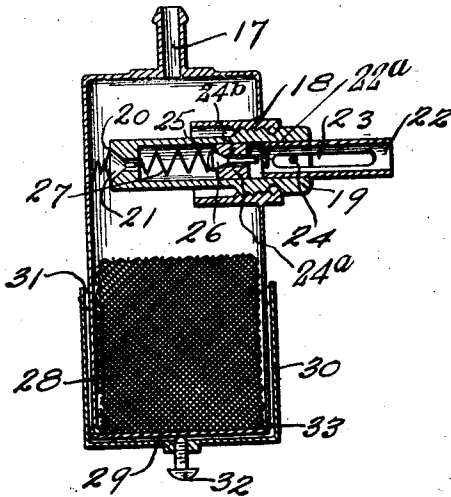
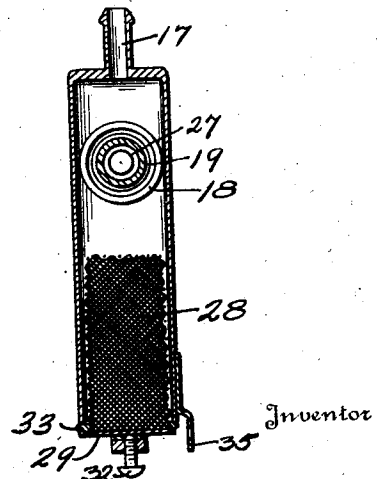


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN H. WILLIAMS, OF DETROIT, MICHIGAN.

LIFE PRESERVER.

Application filed March 9, 1925. Serial No. 14,223.

This invention relates to life preservers and more particularly that type of life preserver which is worn in collapsible form and quickly inflated in case of emergency.

5 An important object of the invention is to provide a life preserver which may be worn without inconvenience to the user and capable of being inflated very rapidly and capable of supporting the body of the
10 wearer.

15 A further object of the invention is to provide a life preserver having simple yet efficient means for inflating same.

20 A further object of the invention is to provide a life preserver which is comparatively simple and durable and efficient for the purpose intended.

Other objects and advantages of this invention will be apparent during the course
25 of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like
30 parts throughout the same,

35 Figure 1 is a perspective view of the assembled device,

Figure 2 is a vertical transverse sectional view through the same,

40 Figure 3 is a rear elevation of the inflating device,

Figure 4 is a side elevation of the same,

Figure 5 is a vertical sectional view taken on the line 5—5 of Figure 4, and

45 Figure 6 is a vertical sectional view taken on the line 6—6 of Figure 3.

50 In the drawings, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 10 designates the garment of the life preserver, said garment being adapted to snugly adhere to the figure when deflated and thereby causing little discomfort to the wearer. The material employed in the manufacture of this garment is of little importance as various materials may successfully be used, such as rubber, rubberizer cloth, or other materials, the object to be attained consisting of a material capable of withstanding the air pressure and also being water-proof. As
55 the jacket must necessarily consist of double thickness material, it is therefore necessary to reinforce the edges thereof with reinforcing strips 11 or the like in order to make said jacket air-tight. A pair of belt retaining straps 12 are secured to the side portions of the garment and have a loop 13

formed on the bottom thereof to engage a belt 14 which is adapted to embrace the waist of the wearer and retain the life preserver in comfortable position about the body. At the lower portion of the back, the garment has a connection piece secured thereto in order to permit attachment of the generating tank 15, which is also secured by the belt through the medium of the loop
60 16.

The generating tank 15 is preferably rectangular in shape and has a nipple 17 formed on the upper section and extending upwardly therefrom. An internally threaded collar 18 is formed on the side of the tank and receives the sleeve 19, said sleeve having a valve seat 20 formed on the rearward portion thereof for receiving a valve 21. A cylindrical plunger 22 is provided with a longitudinal slot 23 to permit the plunger to reciprocate within the sleeve 19, a pin 24 fitted in the sleeve 19 adapted to control movement of the plunger 22 therein. Arranged inwardly of the plunger 22 in the sleeve 19 is a partition 24^a having an opening 24^b therethrough and a valve seat 25 formed at said opening to permit a valve 26 having a stem 26^a extending through the opening 24^b to be seated thereon, said valve
80 being retained against the seat by a compression spring 27. A similar spring, although not required to be so powerful, is employed to force the valve 21 against its seat until pressure is exerted against the inner portion thereof. The plunger 22 has a cross piece 22^a thereon at its inner end which is adapted to engage the valve stem 26^a to unseat the valve 26 when inward pressure is applied on the plunger 22. A screen container 28 is positioned in the lower portion of the tank and secured to the bottom 29, this compartment being held in position by a swinging bracket 30 which is pivoted at 31, and an adjusting screw 32
100 which forces the bottom of this compartment against a gasket 33 placed between the bottom member and the sides of the generating tank in order to prevent any leakage therein. The mesh enclosed compartment 28 is employed as a housing for the gas generating element such as carbide, or the like and may be removed when necessary to refill same. A clip 34 is secured to the slide of the container and provided with an elongated slot 35 for holding the belt retaining loop in position.
110

In use, the device can easily be worn by bathers without incumbrance to them while bathing or swimming and could merely be used as a precaution in the event of exhaustion or in any emergency case. It is also adapted to be used on vessels in the event of mishap and could be quickly adjusted to the body of the wearer. When it is desired to inflate the garment the wearer merely pushes the plunger 22 inwardly thereby unseating the valve 26 and permitting water to act on the valve 21 to unseat the same as the water will have sufficient pressure to overcome the small spring behind the valve 21, thus said water is permitted to reach the carbide in limited quantities which immediately forms a gas and inflates the entire garment, there being sufficient carbide in the container to form necessary buoyancy to float a person for a great length of time.

After usage, the device is merely cleaned and another supply of carbide or gas forming element placed in the screen compartment and inserted into the container once more and is ready for operation. The device could readily find application inasmuch as it is very compact and durable and might be easily carried about the person.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of my invention, or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A life preserver of the character described comprising an inflatable garment member, a belt for holding the garment member in contact with the body, means for securing the garment member to the belt, a gas generating container, means for connecting the container to the inflatable gar-

ment, and means for retaining the generating chemical in said container.

2. A life preserver of the character described comprising an inflatable garment member, looped straps secured to the garment member and depending therefrom, a belt enveloping the body of the wearer and engaging the looped straps; a gas generating container, a nipple formed on the upper portion thereof for penetrating the inflatable garment, a sleeve member formed in one side of the container, a tube member threadedly connected to said sleeve, a valve seated in the tube member, a reciprocating plunger fitted in said tube member, a valve operated by said plunger, springs for retaining the valves on their seats, a screen container positioned in the lower portion of the gas generating container, and a swinging bracket member for retaining the screen container within the generating container.

3. A life preserver of the character described comprising an inflatable garment member, a belt adapted to be placed around the waist of the wearer, straps for connecting the garment to the belt, a gas generating container, a nipple formed on the upper portion of the container, a sleeve formed on the side of said container, a tube threadedly connected within said sleeve, a valve seated in the extremity of said tube member, a reciprocating plunger positioned in said tube, a valve operated by movement of said plunger, coil springs for securing the valves against their seats, means to prevent displacement of the plunger, a screened chemical compartment positioned in the lower portion of the container, a swinging bracket member adapted to retain the screen container within the gas generating container, and a screw for securely retaining the bottom of the container in position.

In testimony whereof, I have affixed my signature.

JOHN H. WILLIAMS.