May 22, 1928. 1,670,591

V. MERIFIELD

LIFE PRESERVING DEVICE

Filed Oct. 2, 1926

Fig. 1

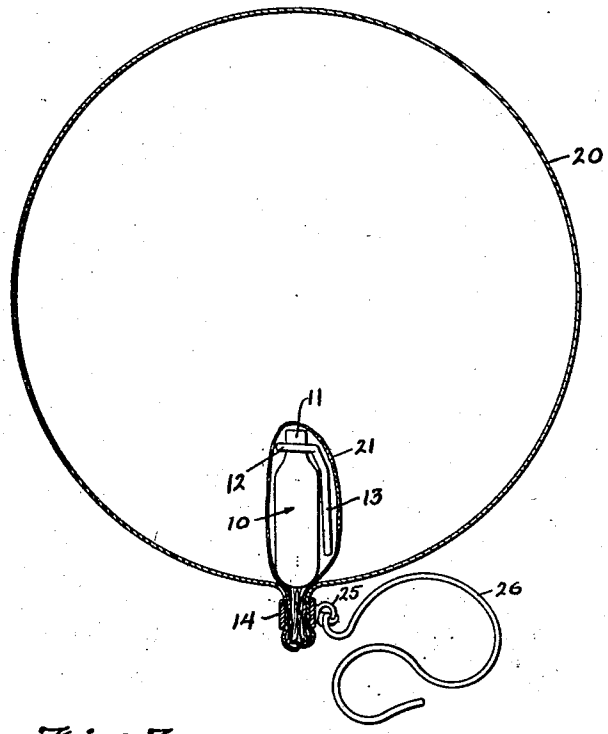


Fig. 2

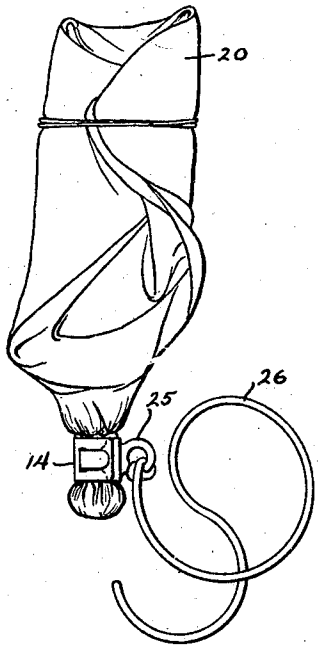


Fig. 3

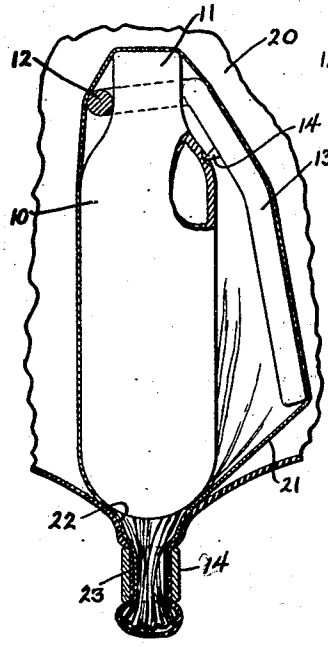


Fig. 4

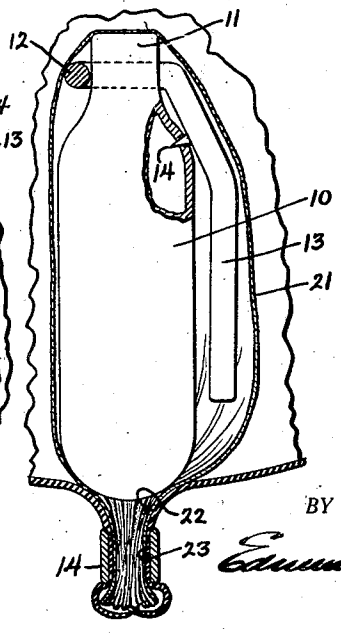


Fig. 5

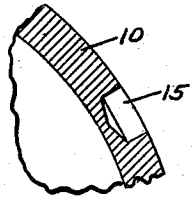
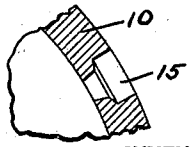


Fig. 6



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UNITED STATES PATENT OFFICE.

VERNER MERIFIELD, OF LOS ANGELES, CALIFORNIA.

LIFE-PRESERVING DEVICE.

Application filed October 2, 1926. Serial No. 139,082.

This invention relates more particularly to a buoyant life preserver, and it is a main object of the invention to provide a device that may be conveniently worn by bathers in a collapsed condition and which may be instantly brought into a buoyant condition to support the bather when he is in danger of drowning.

A further object is to provide a device that is extremely light in weight and which will offer no impediment to a bather while in the water.

A still further object is to provide a simple life saving device that is inexpensive to manufacture, and one that will support a bather of maximum weight at the surface of a body of water.

Briefly, the invention comprises a metal shell or casing for confining a compressed gas mounted within a sealed expansible member in such manner that the same may be wrapped therearound to form a small and compact device. Provision being made in the form of an arm having a penetrating spur for puncturing the gas shell or casing to release the gas to instantly inflate the expansible member. Flexible cords or tapes are also provided in order that the device may be conveniently secured to a bather's costume.

In the drawings which illustrate one embodiment of the invention:

Fig. 1 is a sectional view of the life preserver in an inflated condition.

Fig. 2 is an elevation of the device in a collapsed condition.

Fig. 3 is an enlarged detail view partly in section of the gas container showing the trigger puncturing arm in an inoperative position.

Fig. 4 is a similar view showing the trigger puncturing arm in an operative position.

Fig. 5 is a sectional detail view of a portion of the wall of the gas container showing the puncturing socket or recess prior to a puncturing operation.

Fig. 6 is a similar view showing the bottom wall of socket punctured to release the gas.

Referring now more particularly to the drawings the life preserver device preferably consists of a metal gas container 10 of cylindrical form approximately two and a half (2½) inches long and three-quarters (¾) of an inch in diameter, one end 11 being reduced to form a shoulder for pivotally supporting in position thereon the ring end 12, of an operating trigger arm 13 that extends downwardly therefrom alongside the container. Near the upper end of arm 13 is formed a wall penetrating spur 14 that normally lies within a socket 15 formed in the upper portion of the wall of the container, the bottom wall of the socket being of relatively thin metal in order that the spur will readily puncture the same when pressed thereagainst to release the compressed gas therefrom. In practice I have used compressed carbonic acid gas compressed to about fourteen hundred fifty (1450) lbs. per square inch, and have found the same to be entirely satisfactory for inflation purposes.

The expansible or buoyant member 20 of the device is of globular form and of the approximate size when inflated of a toy balloon capable of displacing about two hundred sixty (260) cubic inches of water. Member 20 may be formed entirely of rubber, but in order to prevent an accidental breakage after inflation, it may be formed of a rubberized fabric.

In order to mount the gas container within the buoyant member and hold the same in fixed relation thereto, I preferably employ a soft fabric cover member 21 of circular formation, its edge extending below the semi-globular end 22 of the container, drawn together and extending into the elongated neck opening 23 of the expansible member, a clamp 24 holding the cover member and the neck 23 of the expansible member in a sealed relation to prevent the escape of gas from the container after inflation. Clamp member 24 is provided with a ring 25, to which is secured a tape 26 designed for suspending the device from a bather's costume or suit.

In practice the expansible member 20 in its collapsed condition is wrapped around the gas container as shown in Fig. 2, a rubber band 27 holding the said member in its folded form. Should a bather provided with one of the devices find himself in danger while in the water, a simple pressure on the puncturing arm or trigger will force the spur into the thin bottom wall of the recess or socket 15 to release the compressed gas therefrom, the gas instantly inflating the expansible member. The device will readily support the heaviest person at the surface of the water and thus prevent drowning before assistance arrives.

From the above it will be clear that I have provided a life saving device that will not interfere with a swimmer's movements while in the water, and which will prove effectual in preventing accidental drownings.

What I claim is:

1. A life preserver comprising an expansible member, a gas container disposed within said member, and means pivotally secured to said container to release the gas therefrom to inflate the expansible member.

2. A life preserver comprising an expansible member, a compressed gas container mounted within said expansible member, means to hold the container in fixed relation to the expansible member, and means pivotally connected with said container for releasing the gas therefrom to inflate the expansible member.

3. A life preserver comprising an expansible member, a metal compresed gas container mounted within said member and in fixed relation thereto, a pivoted arm having a penetrating spur formed thereon for puncturing the wall of the container to release the gas to the expansible member to inflate the same, said arm being pivoted to the container and means to seal the expansible member against gas leakage therefrom.

4. A life preserver comprising an expansible member having an opening leading therefrom, a metal compressed gas container mounted within said member, a metal penetrating member mounted on said container for releasing the compressed gas therefrom to inflate the expansible member, a fabric cover enveloping said container for holding the same in place, a portion of said cover passing through the opening in said expansible member, and a clamp passing around the container at its opening to seal the opening against the escape of gas therefrom and to hold the container cover in position.

5. A life preserver comprising an expansible member, a metal gas container sealed within the expansible member having a portion of its wall weakened, and means connected to said container for puncturing the weakened portion of its wall to release the gas therefrom to inflate the expansible member.

6. A life preserver comprising a sealed expansible member, a compressed gas container disposed within said sealed expansible member, means connected with said container and operable exteriorly of the expansible member for releasing the gas from said container to inflate said member, the gas container and its operating means being disposed wholly within the sealed expansible member.

In witness that I claim the foregoing I have hereunto subscribed my name this 9th day of September, 1926.

VERNER MERIFIELD.