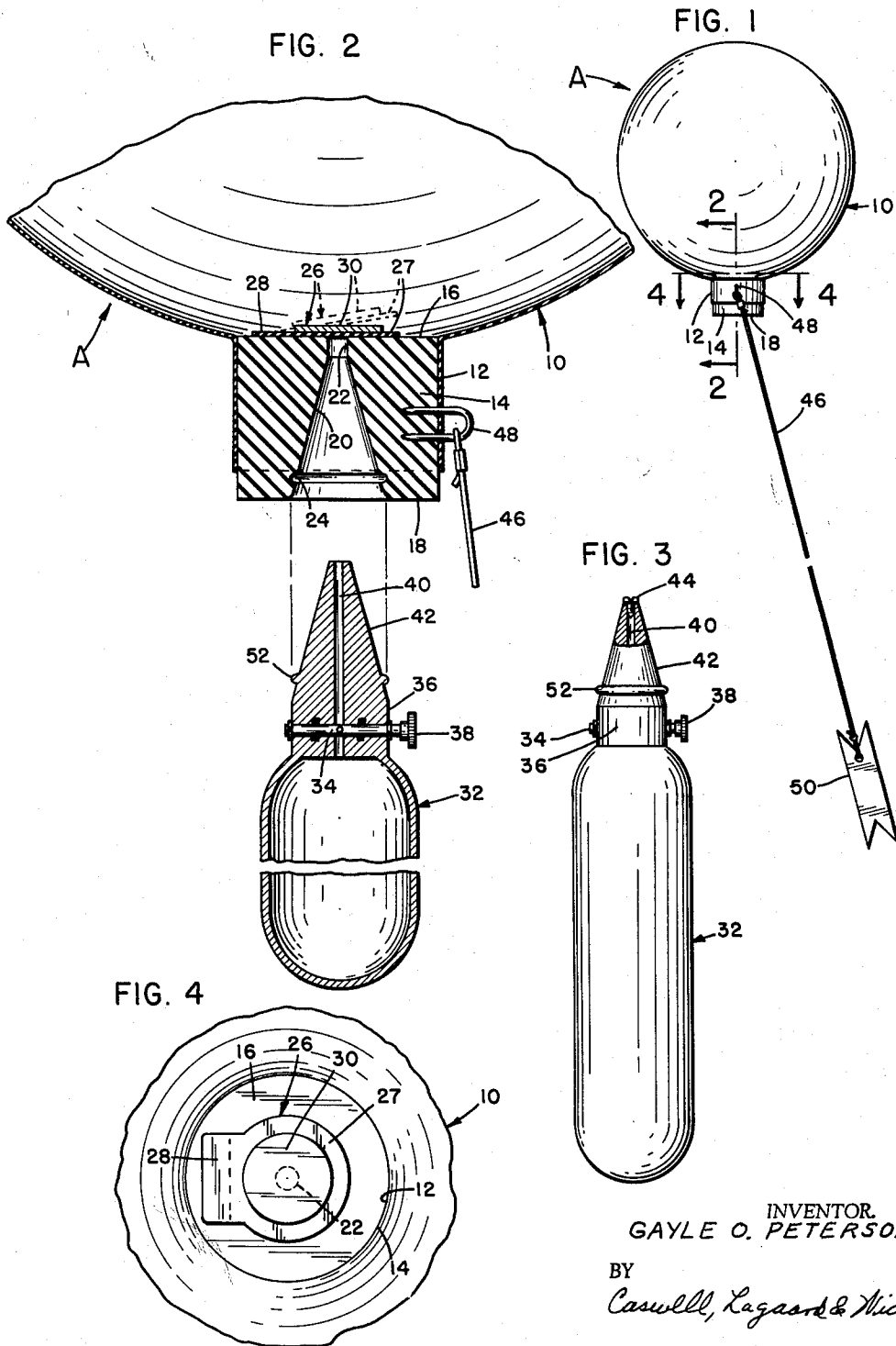


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G. O. PETERSON
INFLATABLE SIGNAL BALLOON

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INVENTOR
GAYLE O. PETERSON

BY
Caswell, Lagaard & Nicks

ATTORNEYS

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INFLATABLE SIGNAL BALLOON
Gayle O. Peterson, 2962 Swan Lake Road,
Duluth, Minn.
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1 Claim. (Cl. 116—124)

The invention relates to an improvement in signal buoy balloon which is payed out on the end of a line.

It is an object of the invention to provide a captive balloon which may be used as a signal or marker device. It is a further object to provide a signal balloon having a closure member having a new and novel means for receiving the end of a cartridge filled with a gas for inflation of the balloon. The new and novel cartridge receiving means allows for easy, quick and positive connection of the gas cartridge with the neck of the balloon for easy effective filling of the balloon whereby the balloon may be allowed to rise on a line payed out from a reel and act as a signal. The cartridge receiving means allows a hunter lost in the woods, for example, to put up a signal balloon in a simple, quick and positive manner.

It will not be here attempted to set forth and indicate all of the various objects and advantages incident to the invention, but other objects and advantages will be referred to in or else will become apparent from that which follows.

The invention will appear more clearly from the following detailed description when taken in connection with the accompanying drawings, showing by way of example a preferred embodiment of the inventive idea wherein like numerals refer to like parts throughout.

In the drawings forming part of this application:

FIGURE 1 is a perspective view of the signal balloon with a line connected thereto and also a supply reel.

FIGURE 2 is an enlarged sectional view on the line 2—2 of FIGURE 1 with the nozzle of a gas cartridge in spaced relation to the closure-receiver member.

FIGURE 3 is an elevational view on a reduced scale of the gas cartridge removed from the closure member.

FIGURE 4 is an enlarged sectional view on the line 4—4 of FIGURE 1.

The signal balloon A includes the inflatable balloon 10 formed with the neck 12 adapted to receive the closure plug 14. The closure plug 14 is generally cylindrical in formation having the inner end 16 and the outer end 18. Extending into the closure plug 14 is the internal conoidal recess 20 terminating in the short conduit 22 at the inner end 16. The numeral 24 designates an annular recess formed on the inner surface of the conoidal recess 20.

Further provided is the flapper valve 26 consisting of the flexible plate 27 formed with the tab portion 28. The valve 26 is properly weighted by means of the weight 30 secured to the top of the valve plate, and the valve is hingedly mounted by means of the tab portion 28 secured to the inner end 16 of the plug 14 with the flapper plate 27 in axial registration with the conduit 22 when closed.

When gas is supplied to the balloon 12 as hereinafter described the pressure of the same causes the valve 26 to remain on the conduit 22 and thereby seal off the balloon. The weight 30 aids the valve in closing when the pressure in the balloon is slight. When gas is introduced into the balloon, as hereinafter described, the valve 26 hinges upwardly and allows gas to enter but not to escape in the manner set forth.

Further provided is the cartridge 32 filled with a lighter than air gas and which has the valve 34 mounted in the neck 36 thereof operable into open or closed position by means of the small knob 38. Leading from the valve

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34 is the conduit 40 formed in the conoidal nozzle 42 of the cartridge 32. The outer end of the conduit 40 may be closed by means of the small screw 44.

A length of line 46 is secured at one end to the closure plug 14 by means of the staple 48, and the other end of the line is secured to the reel 50 on which the line is wound. The nozzle 42 has formed on the outer surface thereof the annular rib 52 which engages in the annular recess 24 of the conoidal recess 20 to insure a positive connection of the nozzle 42 in the recess 20 of the plug 14.

In using the device A, the operator removes the screw 44 and inserts the nozzle 42 into the conoidal recess 20 with the rib 52 snapped into place in the annular recess 24 thereby insuring a tight fit of the nozzle in the recess 20 of the plug 14. It will be seen that the nozzle can be quickly and easily inserted into the closure plug with a minimum of dexterity required and in a minimum of time. The conoidal surfaces of the recess 20 and the nozzle 42 provide a self-directing union of the two together.

With the nozzle 42 of the cartridge in place in the plug 14, the knob 38 is turned to operate the valve 34 to allow gas to pass from the cartridge through the conduit 40 of the nozzle and the short conduit 22 of the plug 14 where it raises the valve 26 and then enters the balloon 10. When the desired degree of inflation of the balloon is obtained, the valve 34 of the cartridge is shut off and the nozzle removed from the plug 14. The operator may then pay out the line 46 from the reel 50 and allow the balloon to rise to a predetermined height to act as a signal of distress or any other type of signal desired.

The invention is not to be understood as restricted to the details set forth since these may be modified within the scope of the appended claim without departing from the spirit and scope of the invention.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

A signal balloon including an inflatable body having a neck portion, a closure plug mounted within the neck portion of said body, said plug having a conoidal passageway extending therethrough into said body, the conoidal passageway of said plug having an annular recess formed on the inner surface thereof, check valve means to hold the balloon inflated, and gas cartridge means removably insertable into said plug, and operable to inflate said balloon, said gas cartridge means including a tapered conical nozzle engageable within the conoidal passageway of said plug, the said nozzle having an annular external rib removably engageable with the annular recess of said plug to sealingly unite said gas cartridge with said plug during the inflation of said balloon.

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70 LOUIS J. CAPOZI, *Primary Examiner.*

LEO SMILOW, *Examiner.*