No. 697,362. Patented Apr. 8, 1902.

H. PREVOST.

LIFE PRESERVER.

(Application filed July 1, 1901.)

(No Model.)

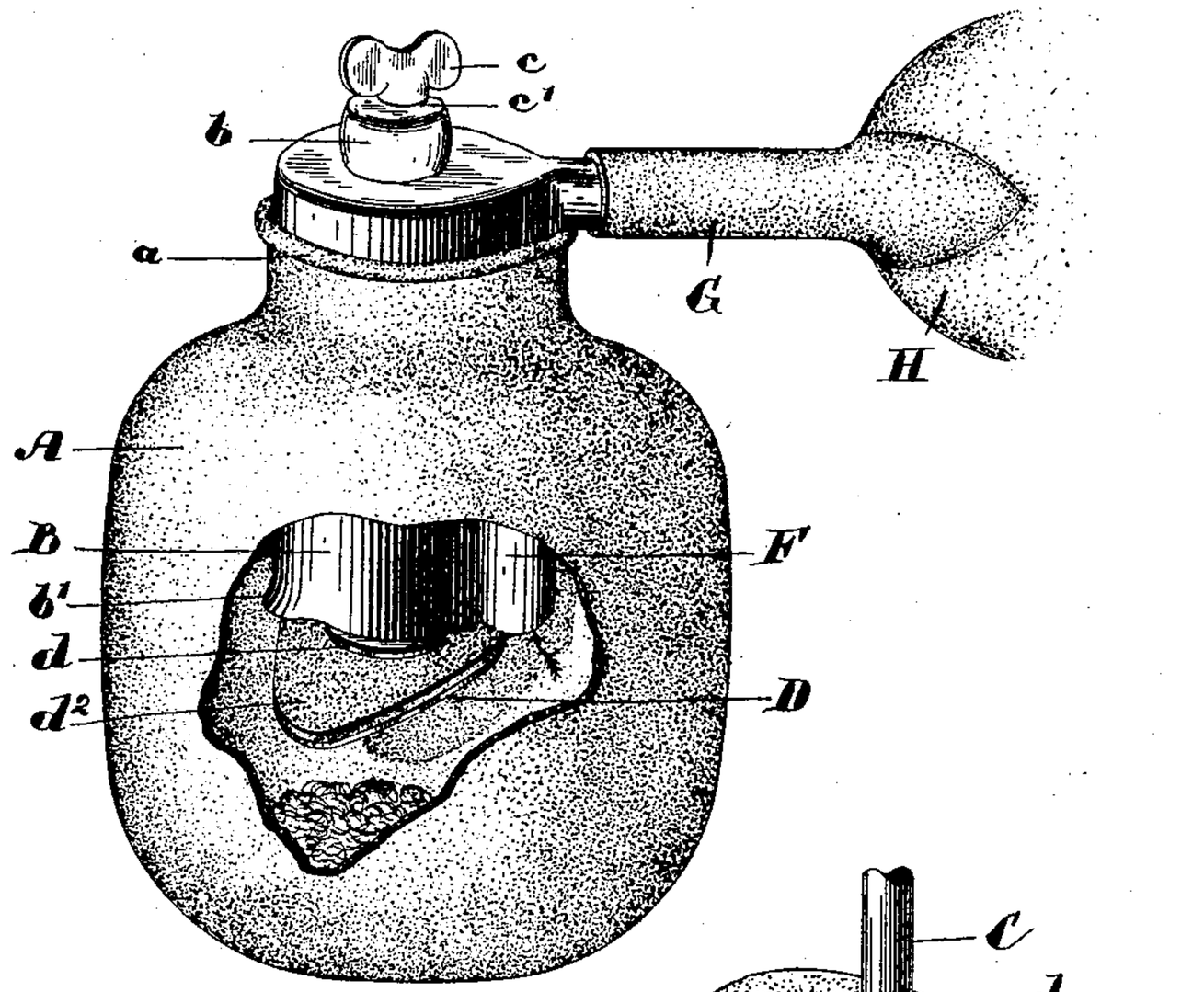

Fig. 1.

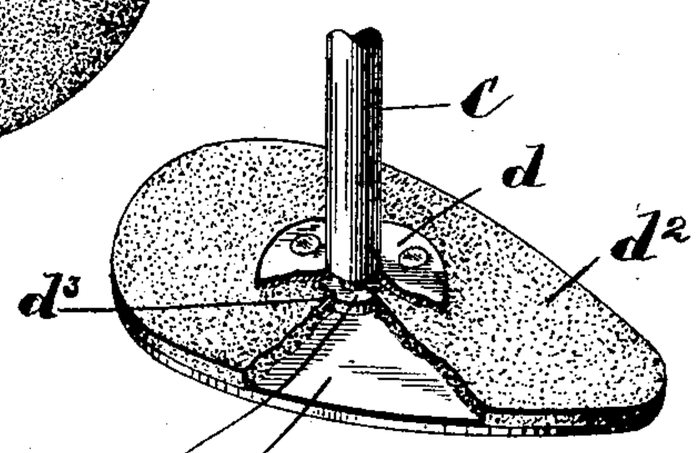

Fig. 3.

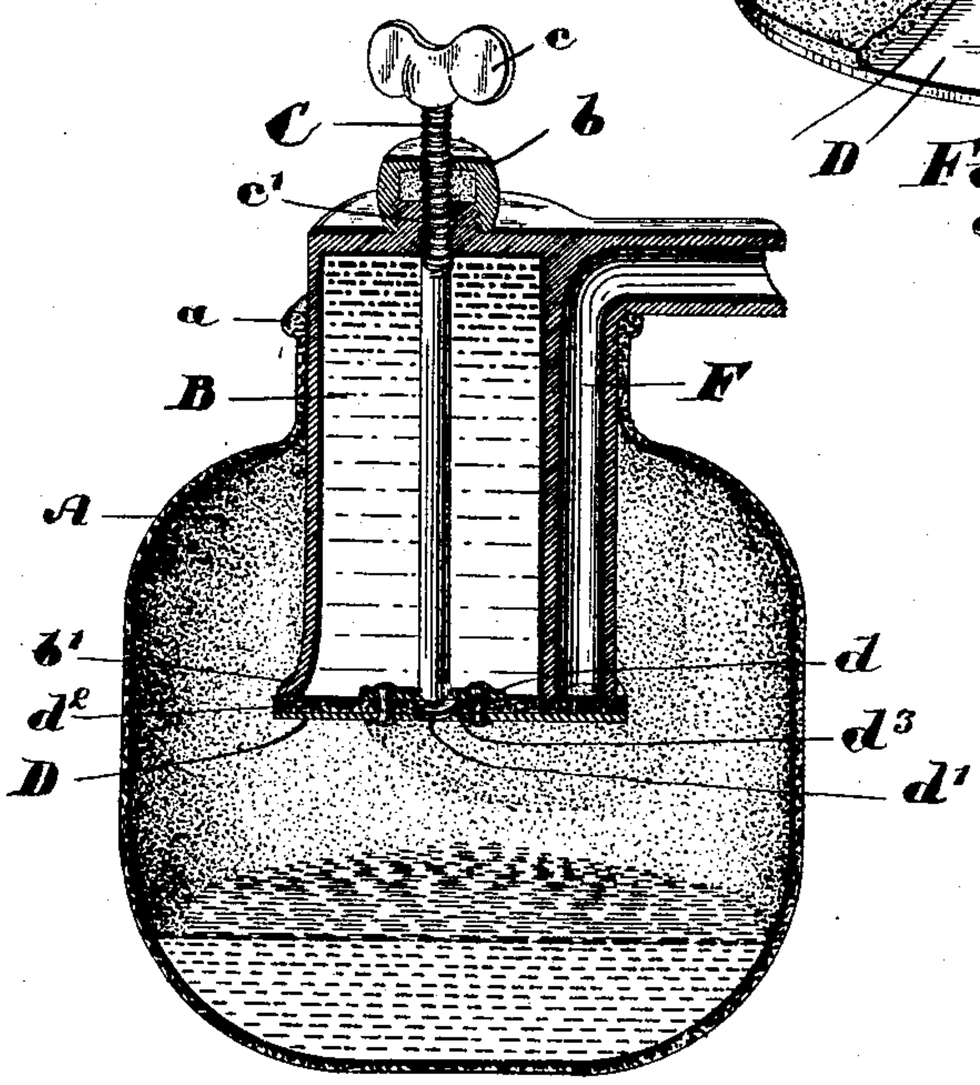

Fig. 2.

Witnesses.

L. Blackmore
G. Hall.

Inventor.

Honore Prevost
by Pitherstonhaugh & Co
Atty's.

UNITED STATES PATENT OFFICE.

HONORE PREVOST, OF MONTREAL, CANADA, ASSIGNOR TO HENRY AYLMER, OF SHERBROOKE, PROVINCE OF QUEBEC, CANADA.

LIFE-PRESERVER.

SPECIFICATION forming part of Letters Patent No. 697,362, dated April 8, 1902.

Application filed July 1, 1901. Serial No. 66,803. (No model.)

To all whom it may concern:

Be it known that I, HONORE PREVOST, a subject of the King of Great Britain, residing at Montreal, in the district of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Instantaneous Inflating Devices for Collapsible Life-Belts, of which the following is a specification.

My invention relates to improvements in instantaneous inflating devices for collapsible life-belts and the like; and the object of the invention is to devise a gas-generating receptacle which shall be of comparatively small proportions, and yet be quick and effective in the generating of the gas to be used for inflating purposes; and it consists, essentially, of a receptacle open at its lower end and placed in a rubber bag, with its head protruding from the neck thereof, and a threaded spindle inserted through a stuffing-box in the top of the receptacle and carrying at its lower end a cover for the open bottom of the receptacle, the said cover being also designed to close the open end of a gas-supply pipe in proximity to the receptacle or attached thereto, the various parts being constructed in detail as hereinafter more particularly described.

Figure 1 is a perspective view of my device with a portion of the bag broken away. Fig. 2 is a sectional perspective view of my device inserted in the bag. Fig. 3 is a detail of the cover with a portion of the spindle.

Like letters of reference indicate corresponding parts in each figure.

A is the rubber bag, which converges into a neck at its top end.

B is the receptacle, which is here illustrated as being substantially cylindrical and forms a stopper for closing the neck of the rubber bag A. The receptacle B has at its top end the stuffing-box *b*, through which the threaded spindle C is inserted. The threaded spindle C carries at its upper end a suitable thumb-screw or butterfly-nut *c* and at its lower and open end the cover D. The spindle C has a reduced lower end, on which the plate *d* is pivoted. A suitable rivet *d'* at the extreme lower end of the spindle C keeps the plate *d* in its place. The plate *d* is then riveted through the facing d^2 of rubber to the cover D, the orifice d^3 being cut in the rubber facing to allow a seat for the rivet *d'*. It will be thus seen that the spindle can be turned without turning the lid D, though it is preferable to have a slight friction by the rivet *d'* on the plate *d*.

The passage F is to one side of the receptacle B and is preferably a part of the same casting. The mouth of passage F is in line with the bottom of the receptacle B, so that a slight extension of the lid D closes the said mouth securely. The upper portion of the passage F is extended so as to form a connection with the reduced tubing G of the collapsible belt H.

The various parts of my invention being described in detail, I shall now more fully explain the operation thereof.

The receptacle B, having the passage F located at one side thereof, is placed inside the rubber bag A, leaving the top end only protruding. The neck *a* of the rubber bag fits firmly and tightly around both the receptacle B and the passage F, so that the lower and open ends of both will be well down inside the bag; but before placing the receptacle thus it has to be charged with some suitable chemical, such as an acid. This is accomplished in lowering the spindle by turning it down in the threaded orifice *c'*, and it will be readily seen from the foregoing description that the cover over the bottom of the receptacle is thus forced outwardly until it leaves uncovered the bottom of the receptacle and the mouth of the passage-way F. The lip *b'* is provided to one side of the receptacle, and on reversing the receptacle the acid may be readily poured in without any danger of spilling. When the receptacle has been filled with the necessary acid, the spindle is once more turned, though in the opposite direction, by means of the thumb-screw *c* until the lid D is drawn tightly up against the bottom of the receptacle and at the same time against the bottom of the passage-way F, thus securely closing both the receptacle and the passage-way to prevent the escape of the acid or the further ingredients from the receptacle or through the passage-way. The bag A is then partially filled with one or

two of the other constituents toward the formation of a gas, and after firmly securing the neck *a* of the bag onto the upper portion of the receptacle B and of the passage-way F, so that the major portion of both receptacle and passage-way are inside the bag, the device is ready to be connected to the collapsible belt to be inflated. It will now be seen that on turning the thumb-screw *c* the lid D is released from covering the open bottom of the receptacle and also the mouth of the passage-way F, and immediately the contents of the receptacle flow down to the bottom of the bag, and on contact with the constituents in the bag a gas is at once generated and quickly finds an outlet in the passage-way F, rushing through the same and inflating the collapsible belt H.

What I claim as my invention is—

1. In an instantaneous inflating device for life-belts and the like, the combination with a collapsible bag, of a gas-generating auxiliary casing having a stopper with an inner receptacle designed to hold one of the constituents of a chemical gas, and a passage-way leading outside the bag, means for retaining one of said contents in the said inner receptacle, and for releasing the same, and suitable connections to the bag to be inflated, as and for the purpose specified.

2. The combination with a collapsible bag of an auxiliary gas-generating collapsible casing having an inner receptacle extending inwardly from the neck thereof, a gas-supply pipe in proximity to the inner receptacle and leading to the collapsible bag to be filled, and means for opening the inner receptacle and the mouth of the gas-supply pipe simultaneously, as and for the purpose specified.

3. The combination with a collapsible bag, of a substantially cylindrical inner receptacle having a removable bottom, a threaded spindle controlling the bottom and inserted through an orifice and stuffing-box on the top end of the receptacle, a gas-supply pipe in proximity to the receptacle aforesaid and having its mouth open or closed through the action of the said spindle simultaneously with the removable bottom, an auxiliary gas-generating collapsible casing converging to a comparatively small neck where it fits on to the cylindrical inner receptacle, and suitable connections from the gas-supply pipe to the bag to be inflated, as and for the purpose specified.

4. The combination with a collapsible bag, of an inner receptacle, a removable bottom therefor, a suitable facing on the inside of said bottom, a rod rotatably connected to the bottom and controlling its upward and downward movement from the top end of the receptacle, an auxiliary gas-generating collapsible casing firmly secured to the said receptacle, and suitable connections between a passage for the gas from the auxiliary casing and the bag to be filled, as and for the purpose specified.

5. The combination with a collapsible bag, of an inner receptacle having a cylindrical chamber, and a passage to one side thereof, and a threaded spindle controlled by a suitable thumb-screw where it protrudes through the top end of the receptacle and designed to close both chamber and passage-way simultaneously, an auxiliary gas-generating collapsible casing surrounding the lower portion of the said receptacle, an outlet with suitable connections from the aforesaid passage to the collapsible bag to be filled, as and for the purpose specified.

Signed at Montreal this 17th day of June, 1901.

HONORE PREVOST.

Witnesses:
L. BLACKMORE,
G. CURTIS.