(No Model.)

S. PEMBERTON.

LIFE PRESERVER.

No. 426,543. Patented Apr. 29, 1890.

Fig. 1.

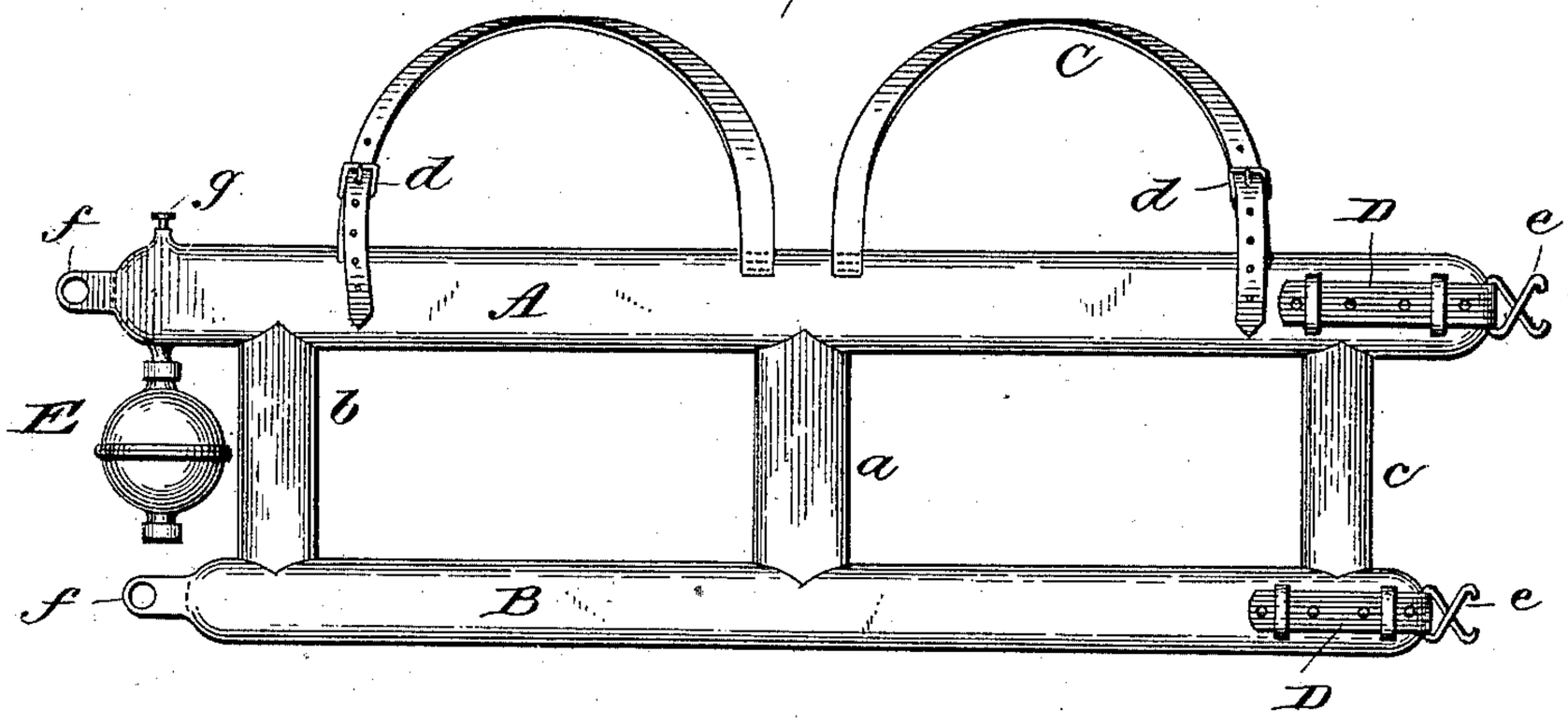

Fig. 2.

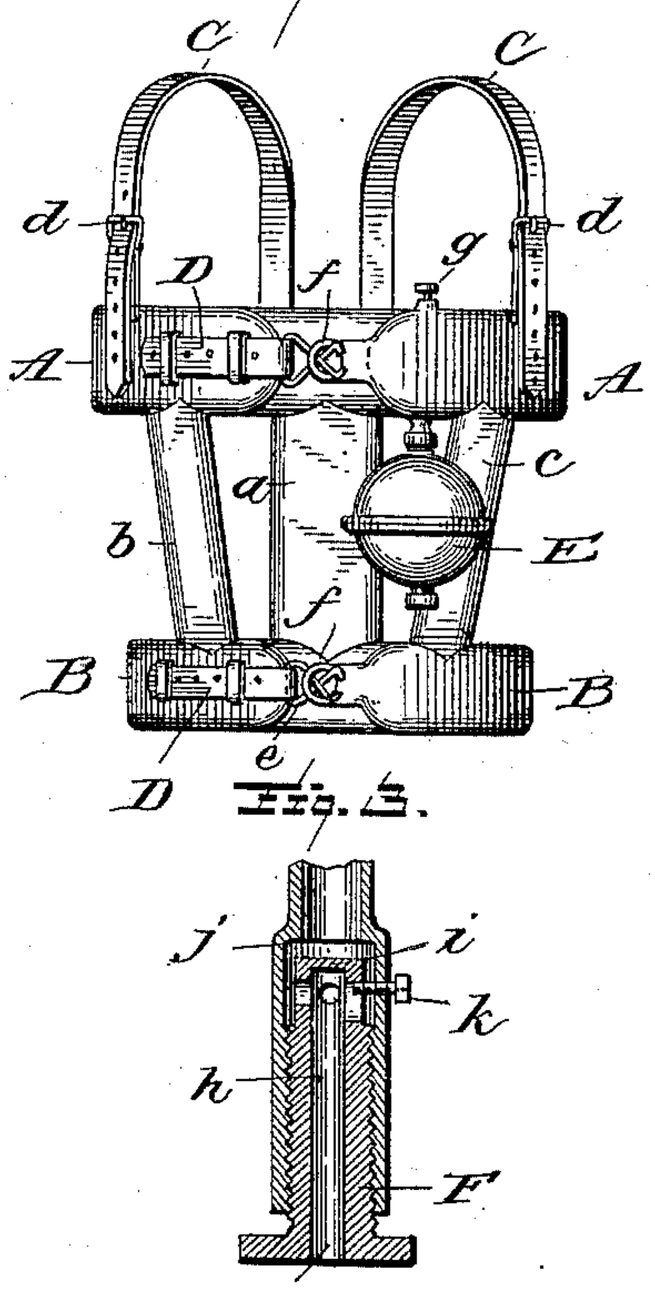

Fig. 3.

WITNESSES:

L. C. Hills.

E. H. Bond.

INVENTOR

Samuel Pemberton.

BY

Chas. H. Fowler.

ATTORNEY.

UNITED STATES PATENT OFFICE.

SAMUEL PEMBERTON, OF ALPENA, MICHIGAN, ASSIGNOR OF ONE-HALF TO ALBERT C. FROST, OF SAME PLACE.

LIFE-PRESERVER.

SPECIFICATION forming part of Letters Patent No. 426,543, dated April 29, 1890.

Application filed February 28, 1890. Serial No. 342,098. (No model.) Patented in England April 6, 1889, No. 5,936, and in Canada August 1, 1889, No. 31,875.

To all whom it may concern:

Be it known that I, SAMUEL PEMBERTON, a citizen of the United States, residing at Alpena, in the county of Alpena and State of Michigan, have invented certain new and useful Improvements in Life-Preservers, (for which I have obtained Letters Patent in Canada, August 1, 1889, No. 31,875, and in Great Britain, April 6, 1889, No. 5,936;) and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in life-preservers; and it has for its object among others to provide an improved life preserver or belt which may be easily and securely fastened to the body, and will be simple in construction and effective in use. I also provide simple and efficient means for inflating the belt or preserver when desired.

The novelty resides in a life preserver or belt constructed and arranged as hereinafter more fully described, shown in the drawings, and then specifically pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a back view of my improved life preserver or belt laid out straight. Fig. 2 is a front view thereof, folded around as it would be around the body and clasped. Fig. 3 is a vertical section through the lock-valve used as an extra protection against the escape of air when the apparatus is inflated.

Like letters of reference indicate like parts throughout the several views.

In the construction of this invention the several parts are formed of rubber or other suitable water-proof material which is capable of being inflated. Two hollow belts or bands A and B are employed, connected at the rear by means of the hollow vertical band *a* and at the ends by the hollow vertical bands *b* and *c*. The lower belt or band B is preferably smaller or narrower than the upper one. In use the upper belt will encircle the body beneath the arms and the lower belt will encircle the body at a point about nine inches, more or less, below the upper belt. The rear connecting-band will be on the back and the end connecting-bands will be in front or under the arms, or in advance thereof, as shown in Fig. 2.

The upper band or belt is provided with adjustable shoulder-straps C, connected at one end to the said band or belt and at the other adjustable by means of suitable buckles or other analogous devices *d*.

The belts are provided with and adjusted by means of the straps D, adjustable on the belts at one end and are provided with springs *e*, which are designed to engage eyes *f* on the opposite ends of the belts, as shown in Figs. 1 and 2.

The belts A, B, *a*, *b*, and *c* are inflated by air passing through a bulb E, connected with one of said belts or bands and provided with a valve at each end, the said valves being so arranged that when the bulb is relaxed the inner valve is closed and the outer one open, and when the bulb is pressed the inner valve is open and the outer one closed. When the belts or bands are inflated, the inner valve is kept closed by the pressure of the air from within.

A suitable vent is provided at any desired point in any one of the bands and actuated by a thumb-screw *g* for the purpose of exhausting the air when desired.

To insure against any possible admission of water or leakage of air a lock-valve (shown in detail on a larger scale in Fig. 3,) is employed. In this figure F is a thumb-screw having an orifice *h*, through which air may pass to the bulb when open, as shown in said Fig. 3. To close this lock-valve the thumb-screw is turned until the inner end *i* is pressed against its seat *j*, which closes the passage to the bulb. To prevent the entire withdrawal of the thumb-screw a small lug near its inner end comes in contact with a

screw or pin *k*, projecting inward through the tube in which the thumb-screw works, as shown in Fig. 3.

It will thus be seen that a simple and effective life-preserver is provided which can be easily and speedily secured to the body and inflated.

Various modifications in detail may be resorted to without departing from the spirit of or detracting from the merits of the invention.

I may sometimes place inside of the belt or belts acids in powder form, which if a person should be thrown into the water with the belt on and not inflated with air, he could work the bulb under water and force sufficient water into the belt to moisten or wet the powder which would at once turn into gas and fill the belt or belts, thereby giving buoyancy to the person having it on. In this case it might be necessary to employ a safety-valve to allow the escape of any accidental over-pressure in the belt. Of course it will be understood that in this case I employ acids or powders which, when they come in contact with water will turn into or make gas. In case these powders are employed the filling of the belts with air will not be affected by the presence of the powders.

What I claim as new is—

1. A life-preserver consisting of two hollow belts, hollow belts connecting the same and extended at right angles thereto, means for inflating the belts, and adjustable shoulder-straps attached to one of the belts, as set forth.

2. A life-preserver consisting of two hollow belts connected by hollow bands at right angles thereto, an inflating-bulb, and a locking-valve, substantially as described.

3. A life-preserver consisting of two hollow belts connected by hollow bands, adjustable shoulder-straps attached to the upper belt, adjustable straps attached to the ends of the belts and provided with fastenings, and means for inflating the belts, as set forth.

4. A life-preserver consisting of two hollow belts connected by hollow bands, adjustable shoulder-straps to the upper belt, adjustable straps at the ends of the belts provided with fastenings, an inflating-bulb, and a locking-valve on the said bulb, substantially as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL PEMBERTON.

Witnesses:
CHAS. B. BROWNING,
ALBERT E. MANNING.