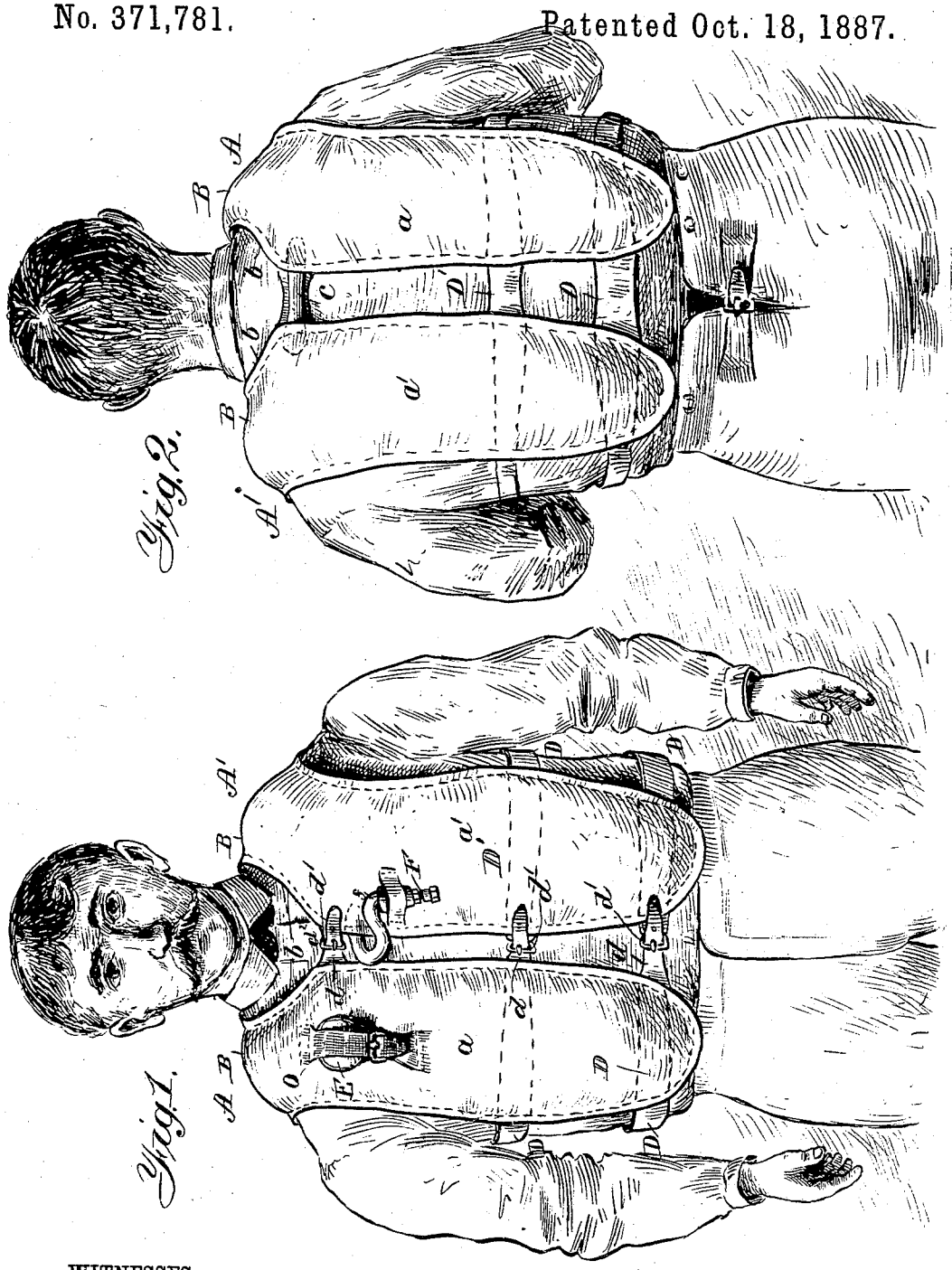
(No Model.)

2 Sheets—Sheet 1.

C. B. MORGAN.

LIFE PRESERVER.

No. 371,781. Patented Oct. 18, 1887.



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(No Model.)

2 Sheets—Sheet 2.

C. B. MORGAN.

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Fig. 3.

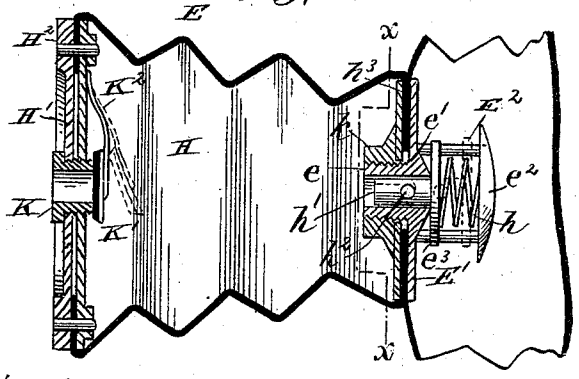


Fig. 4.

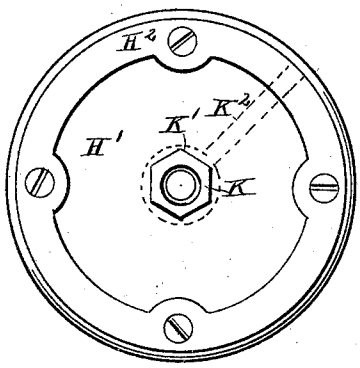


Fig. 5.

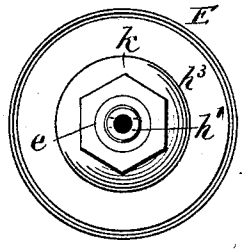


Fig. 6.

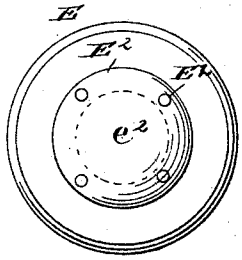


Fig. 7.

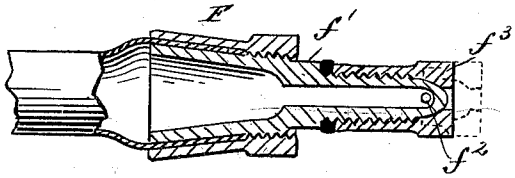
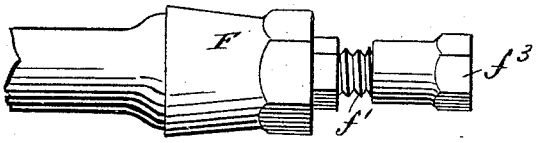


Fig. 8.



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UNITED STATES PATENT OFFICE.

CHARLES B. MORGAN, OF UNCOMPAHGRE, COLORADO.

LIFE-PRESERVER.

SPECIFICATION forming part of Letters Patent No. 371,781, dated October 18, 1887.

Application filed March 25, 1887. Serial No. 232,389. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. MORGAN, of Uncompahgre, in the county of Montrose and State of Colorado, have invented a new and Improved Life-Preserver, of which the following is a full, clear, and exact description.

My invention relates to an improvement in life-preservers, and has for its object to provide a device capable of being quickly applied to the person, and which, when worn, will not impede the progress of a swimmer, and which will support a person ignorant of the art of swimming upon the surface of the water. The object of the invention is also to provide a means of inflating the device when in the water and the application of an air-pump in connection with the device.

The invention consists in the construction and arrangement of the various parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figures 1 and 2 are respectively front and rear views of the life-preserver, illustrating its application to the person; and Fig. 3 is a central longitudinal section through the pump employed to supply air thereto. Fig. 4 is a front elevation of said pump, and Fig. 5 is a section through line *x x* of Fig. 4. Fig. 6 is a rear elevation of the said pump. Fig. 7 is a longitudinal vertical section through the device employed to inflate the preserver from the lungs, and Fig. 8 is a side elevation thereof.

In carrying out the object of the invention the life-preserver is constructed of any suitable water-proof material, preferably rubber, and in virtually two sections, A and A′, each section being made in the form of oblong bags adapted to extend vertically each side of the breast and back, as shown in Figs. 1 and 2, the opposite front and rear bags, *a a′*, being respectively united by an integral bag, B, adapted to extend over the shoulders, and having the inner edges, *b*, curved for adjustment to the neck.

The interiors of the sections A and A′ are united in the back at the top by an incased tube, C, as shown in Fig. 2, and they are further united exteriorly by two or more, preferably two, bands, D D′, of the same material, which bands are attached to the inner face of the front and rear bags, *a a′*, the one near the bottom and the other a distance below the armpits.

The bands D D′ are adapted to encompass the body, one end terminating at the front in an apertured strap, *d*, and the other having secured thereto a buckle, *d′*, adapted to receive said strap. By means of these straps and buckles a quick and ready fastening for the preserver upon the body is obtained. A third and upper similar fastening, d^2, is provided to unite the two sections at the throat

It will be seen from the above description that when the preserver is inflated the air is confined vertically parallel with the body of the wearer, and therefore does not act as an impediment in swimming, as is the case with preservers worn horizontally the body, which offer great resistance to the water. Again, it will be observed that the preserver is substantially in one piece, while in reality in two equal sections, thereby enabling a person to quickly apply the same, and that from its peculiar shape the device may be conveniently worn under a coat.

The life-preserver above described is provided with two distinct means of inflation—first, through the medium of an air-pump, E, and, secondly, through the medium of a mouthpiece, F, either of which may be operated while in the water by turning and floating upon the back, the arms being free, as no portion of the inflated sections passes beneath or over them.

The pump E is preferably located over or above the right breast, and consists of an annular centrally-apertured plate, E′, provided with a tubular threaded central projection, *e*, integral with one side, and a conical projection, *e′*, surrounding the aperture therein, integral with the opposite side. Upon the face of the plate E′ having the said conical projection a cage, E^2, is supported, having a circular end plate, e^2, and within said cage a spiral or coiled spring, *h*, is held, bearing respectively against the end plate, e^2, and an annular washer, e^3, which washer finds a seat

upon the conical projection e'. One end of the spring is made fast to the end plate, e^2, and the other end, extending through the washer, is secured to a suitable valve, h', sliding in the tubular projection e, which valve is supplied with aligning ports h^2.

A suitable opening is made in the outer surface of the front bag, a, to admit the tubular projection e, and a washer, h^3, is entered over the said tubular projection to a bearing upon the said surface of the bag. A lock-nut, k, is then screwed upon the threaded projection e to a bearing upon said washer h^3. Prior, however, to bringing the plate E′ and washer h^3 together one end of a suitable bellows, H, is made to intervene the said plate and washer. Therefore, when the lock-nut k is screwed up tight, the bellows and surface of the bag a are completely sealed.

The outer end of the bellows H is made larger than the inner end, and is securely held between two annular plates, H′, re-enforced by a ring, H^2, the said ring and plates being fastened by suitable bolts or rivets, so as to make a perfectly air-tight joint.

The plates H′ are apertured centrally and a thimble, K, fitted in said aperture, against the under side of which thimble a cushion, K′, is made to bear and to close the aperture, the said cushion being attached to a horizontal spring-stem, K^2. Thus by working the bellows H air is drawn into the same and pumped from thence into the bags a a', as will be readily seen by reference to Fig. 3. When the bellows is not in use, it may be secured by a strap and buckle, O, in close contact with the preserver, as shown in Fig. 1.

By means of a tube, f, connected with the bag a^1, preferably at the front, and a mouth-piece, F, the preserver may be inflated from the lungs. Thus an extra means of inflation is always at hand should one become damaged.

The mouth-piece F may be of ordinary construction, but is preferably formed as shown in Fig. 7, in which the inclosed and threaded nipple f' is provided with aligning end apertures, f^2, over which the mouth-piece proper, f^3, is screwed. When the said mouth-piece is screwed outward, as shown in dotted lines, Fig. 7, air may be forced into the bags through the nipple f', and when said mouth-piece is screwed down to a seat upon the nipple the vent is thoroughly closed.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A life-preserver composed of two independent inflated sections united at the back only by a horizontal tube, one section provided with an air-pump and the other section provided with a mouth-piece, whereby the entire preserver may be inflated either from the pump or mouth-piece, as set forth.

2. A life-preserver composed of two independent inflated sections united at the back only by a horizontal tube, each section adapted to extend vertically of the body and across the shoulders, and retained in position upon the person by horizontal bands attached to each section and united in front by a buckle, substantially as shown and described, and for the purposes herein set forth.

3. A life-preserver constructed of two independent inflated sections united at the back only by a horizontal tube, each section adapted to extend vertically of the body front and rear and horizontally across the shoulder, and retained in position upon the person by horizontal bands attached to each section, united in front by buckles, the one section provided with an air-pump, the other with a tube for inflation from the lungs, substantially as shown and described, whereby the entire preserver may be inflated from either pump or mouth-piece, as set forth.

4. The combination, with the united sections a a', adapted to extend vertically of the body and across the shoulders, provided with a rear connecting-tube, C, and a series of attached horizontal bands, D, provided with buckles d', and an upper strap and buckle, d d', of an air-pump attached to the said sections a near the shoulder, a strap, O, for retaining said pump in a closed position, and a mouth-piece, F, attached to the section a', substantially as shown and described, whereby the entire preserver may be inflated by either the pump or mouth-piece either in or out of the water, as set forth.

5. The combination, with a life-preserver constructed substantially as herein shown and described, of an air-pump, E, attached thereto near the shoulder, consisting of the plate E′, carrying a valve, h', and supporting a cage, E^2, a spring, h, held without said cage and actuating said valve, a bellows, H, and an outer centrally-apertured plate, H′, together with a spring-actuated cushion, K′, adapted to cover said central aperture, located within the said bellows, substantially as shown and described, and for the purposes herein set forth.

CHARLES B. MORGAN.

Witnesses:
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F. W. CLARKE.