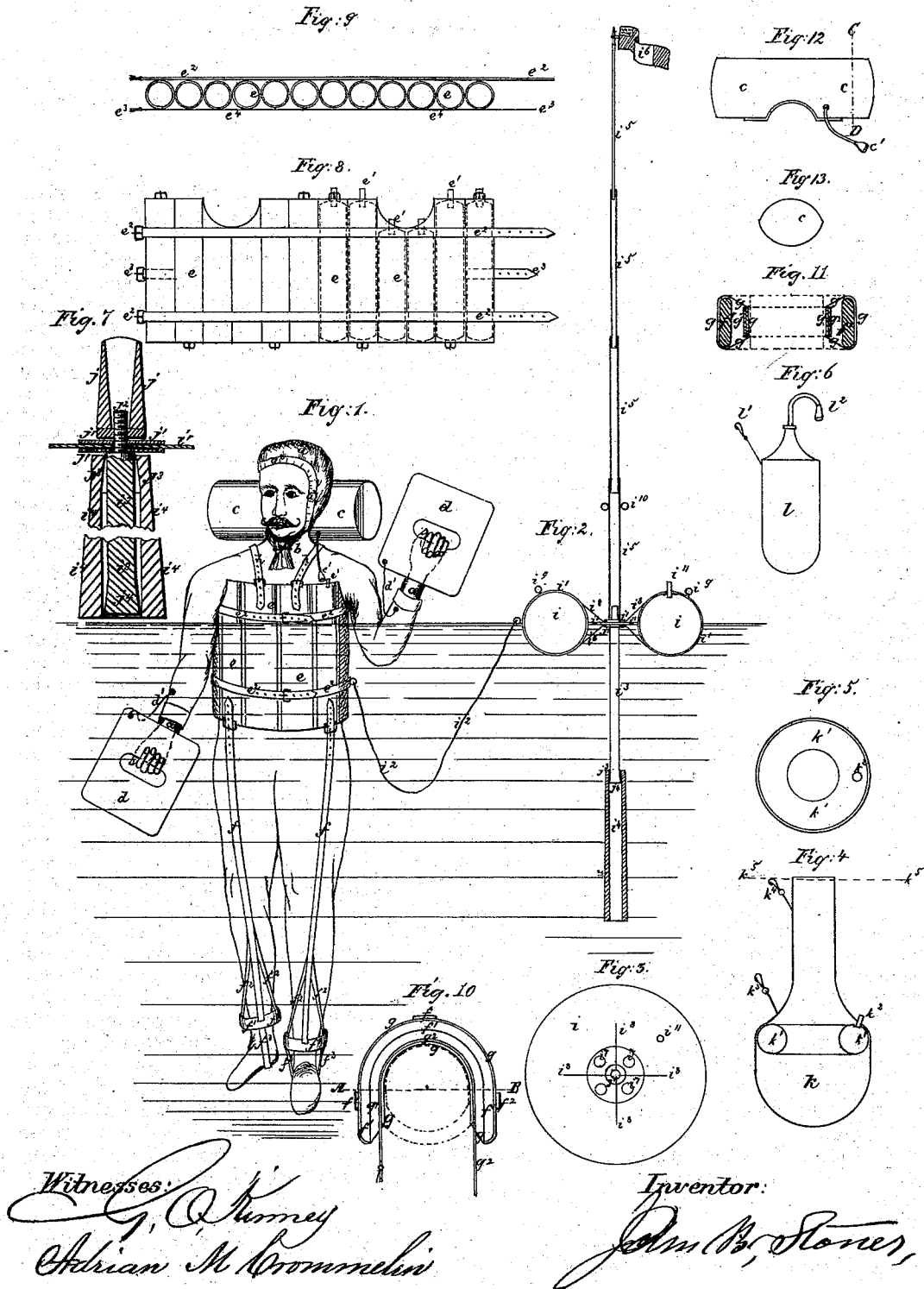


J. B. STONER.
Life-Preservers.

No. 156,443.

Patented Nov. 3, 1874.



UNITED STATES PATENT OFFICE.

JOHN B. STONER, OF NEW YORK, N. Y., ASSIGNOR TO DAVID W. IVES, OF SAME PLACE.

IMPROVEMENT IN LIFE-PRESERVERS.

Specification forming part of Letters Patent No. **156,443**, dated November 3, 1874; application filed March 20, 1872.

To all whom it may concern:

Be it known that I, JOHN B. STONER, of New York, in the county of New York, in the State of New York, have invented a new or Improved Suit or Dress and Fittings for Saving Life in Water; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in a life-saving jacket and ballast-weights, constructed to fit loosely around the legs, and suspended by straps from the jacket, whereby the weight of the ballast is removed from the limbs of the wearer and borne by the jacket, as hereinafter described.

To make a complete life-saving apparatus, I propose to provide, (and use when required,) in connection with the jacket and ballast, a suit to cover the wearer, a signal-buoy, and provision-chests, as represented in the drawings.

Figure 1 shows a man equipped with my apparatus, as he would appear when afloat. Fig. 2 is a vertical section of the floating buoy with its flag or signal staff. Fig. 3 is a horizontal or plan view of the same. Fig. 4 is a vertical section of a water-tight bag for carrying provisions, night-signals, &c. Fig. 5 is a plan view of the same. Fig. 6 is a bag for carrying fresh water. Fig. 7 is a full-size sectional view of that portion of the signal-staff which is under water when in use. Fig. 8 is an elevation of a tubular jacket. Fig. 9 is a horizontal section through the center of the same. Fig. 10 is a plan view of the U-shaped weight and its accessories. Fig. 11 is a section of the same on the line A B, Fig. 10. Fig. 12 is an elevation of the air-tight pillow; and Fig. 13 is a cross-section of the same on the line C D, Fig. 12.

The following reference applies to each figure where the same index-letters appear.

a shows the india-rubber or web cuffs of the sleeves of the suit. *a*¹ is the hood, and *a*² the india-rubber border of the same. *b* shows the opening of the suit, as closed by a

draw-string. *c* is the air-tight pillow when inflated and in the position it would take when the man was lying on the water. *c*¹ is an india-rubber tube for inflating the said pillow, having an air-valve at its outer end. *d* are hand-paddles, made of thin board or other light material, to be used in propelling the person through the water. They are attached to the suit by the cords *d*¹. *e* is a jacket formed of twelve separate and distinct air-tight india-rubber tubes, each cased in strong canvas, and secured to a lining of canvas, *e*¹. Each of these tubes is fitted with an air-valve, *e*¹. The jacket is secured around the wearer by straps and buckles, *e*². The strap and buckle *e*³ secures the canvas lining around the wearer. *f* are the straps connecting the U-shaped weights *f*¹ with the jacket. *f*² are short straps attached to the straps *f*, and to the weights *f*¹ for steadying the latter. *f*³ are the stirrup-straps. The metal weights are made large enough to allow of a space of half an inch, more or less, between the inner face of the weights and the ankle, as shown; and to prevent the said weights striking against the ankle or leg when walking or moving in the water, they are incased in strong canvas cases or bags *g*, to which, on one side of the ankle, at *g*¹, a strap and buckle, *g*², are fixed, which strap passes round the front of the ankle, inside the said canvas bag, and through it on the opposite side of the ankle. It is then passed across the back of the leg and buckled closely, thereby securing the canvas bag in place; and also, through or by means of the latter, the metal weight is laterally suspended, and therefore cannot strike the leg of the wearer in either case. *h* are the shoulder-straps or suspenders of the jacket. *i* is an air-tight india-rubber buoy incased in a canvas covering, *i*¹, and attached to the jacket by the cord *i*². *i*³ and *i*⁴ form the lower or metal portions of the signal-staff, and act as ballasting therefor. *i*⁵ is the upper or above-water portion of the said signal-staff. *i*⁶ is the flag or day signal. *i*⁷ are holes through the central portion of the canvas *i*¹ for the purpose of allowing water to pass freely through. *i*⁸ are stay-straps attached to the canvas covering *i*¹, and to the same canvas at the outer

edges of the washers j^1 . i^9 are metal rings fixed to the canvas covering on the buoy i , for the purpose of attaching water, provisions, signals, and other bags thereto that may be required. i^{10} are rings fixed near the upper end of the lower section of the signal-staff i^5 , for the purpose of attaching the free ends of the said provision and signal bags. i'' is the air-valve through which the buoy i is inflated. j is a hollow nut, tapered to receive the lower part of the staff i^5 . j^1 are washers under the nut j , between which the canvas covering i^1 is secured. j^2 is a projection of i^3 , tapped to fit the nut j , into which it is screwed, and thereby secures the signal-staff to the center of the said canvas covering of the buoy i . The ballasting portions or sections i^3 and i^4 of the signal-staff are constructed on the telescope plan, as shown in Fig. 7, for convenience in carrying. When fixed in place, and the buoy is floated, the tube i^4 slides down until the upper end j^3 , which is contracted, as shown, meets and rests upon the expanded lower end of i^3 , as shown at j^4 . k is a water-tight bag for carrying provisions, day and night signals, and other necessities, which bag is closed by a draw-string, k^5 . k^1 is an air-tight circular

bag, for the purpose of floating the said bag with its contents. k^2 is an air-valve, through which the buoy k is inflated. k^3 shows a cord and snap for securing the bag k to the buoy i at the ring i^9 . k^4 shows a cord and snap for attaching the free end or neck of the bag k to the signal-staff i^5 at the ring i^{10} . l , Fig. 6, is a water-tight bag for carrying a store of fresh water, which is secured to the buoy i at the ring i^9 by a cord and snap, l^1 . l^2 is a tube attached to the neck of the bag l by an air-tight valve, through which the said bag is filled with fresh water. The free end of the said tube is provided with a suitable mouth-piece for convenience in drinking the water.

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

The combination of a life-saving jacket and ballast-weights, constructed to fit loosely around the legs, and suspended by straps from the jacket, whereby the weight of the ballast is removed from the limbs of the wearer and borne by the jacket, substantially as described.

JOHN B. STONER.

Witnesses:

G. O. KINNEY,

ADRIAN M. CROMMELIN.