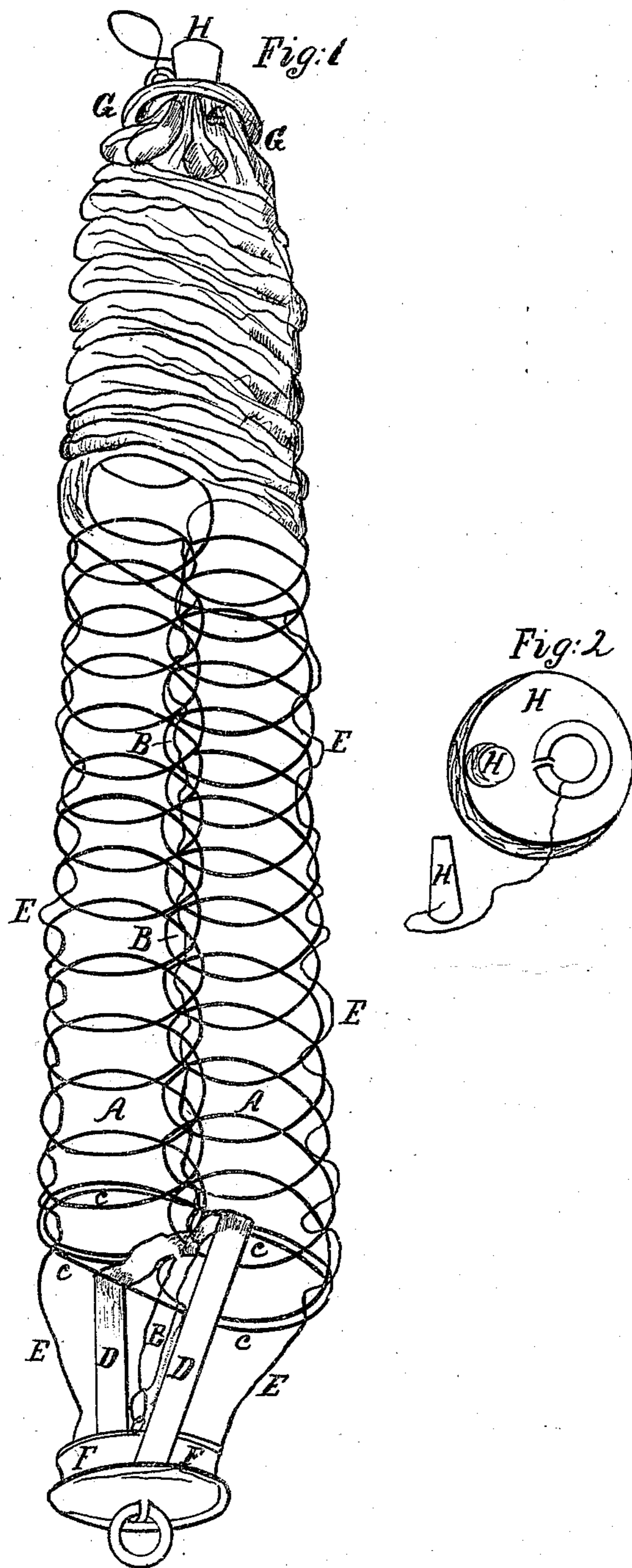


*A. Chandler.*  
*Life Preserver.*

*N<sup>o</sup> 37.74.*

*Patented Oct. 3, 1844.*



# UNITED STATES PATENT OFFICE.

ADONIRAM CHANDLER, OF NEW YORK, N. Y.

## IMPROVEMENT IN LIFE-PRESERVERS.

Specification forming part of Letters Patent No. 3,774, dated October 3, 1844.

*To all whom it may concern:*

Be it known that I, ADONIRAM CHANDLER, of the city and State of New York, have invented new and useful Improvements on the Mode of Distending and Inflating an Air-Bag to be Used as a Life-Preserver; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

I do not claim the invention of distending the air-bag, but merely the mode of doing it, as herein set forth, such mode being an improvement upon the Liancourt Nautilus, which was patented May 10, 1844, the right to which I now hold.

It has been found by experience that an air-bag which is sought to be distended by means of a spiral spring or a helical of an elliptical or square form, or by separate rings of metal or other material, and placed around the body, that part of the fakes next to the body not being secured in their position by any means at present adopted will, upon a slight pressure on the external side of the fakes change their position, and the tendency is to cant each succeeding fake down so that they will lie in a flattened position around the body, and particularly so if a small hole exist in the bag or covering through which the air may escape.

The nature of my invention consists in constructing a spring that will effectually and permanently distend the bag or covering, and also a new and more simple method of admitting the air for the purpose of inflating and confining the same when inflated.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

I construct my spring by placing two helicals of cylindrical form side by side, as shown in the drawings, Figure 1, at A A. The fakes which are thus brought in contact are permanently wired together, forming a double helical. The distance to which the fakes may be separated in elongating the double helical is gaged by a cord running from end to end and attached to each two fakes at the places of contact B B. The ends of each helical ex-

tend to the extreme side of the helical brought in contact and are permanently wired there, so that the end fakes of the double helical C form an ellipse. To these elliptical fakes tapes or webbing D is attached, by which the heads or ends are secured to the spring as an additional fastening to the cord running through the center, as before described, which is also attached to the heads. There are also cords E, running from end to end of the double helical on the extreme sides of each, attached to the fakes at gaged distances, and also attached to the heads. The tendency of these two helicals to cant and flatten down, as before described, is in opposite directions, so that when elongated and placed around the body they permanently brace each other and counteract that tendency. External pressure is effectually resisted and the distention of the bag or covering maintained.

I construct the heads or ends of turned wood, of suitable size and convenient form, so as to allow the tapes or webbing from the elliptical fakes to be tacked or fastened into grooves in the under or lower part of each head F, leaving a space for the cover to be secured to each end by a cord wound around the head at G. Each head is supplied with a ring for securing the frame around the body by means of strings or straps. Through one of the ends I make a cylindrical hole, from three-quarters to one inch in diameter, which is fitted with a conical stopper or plug, as shown in Fig. 2 at H. When this frame is constructed as herein described and covered with any air-tight material, place the foot on the strap at one end and elongate it to its utmost extent. Then put in the stopper and the instrument will be fully inflated and the air may be retained at pleasure.

What I claim as my invention, and desire to secure by Letters Patent, is—

The uniting of two helical springs in the manner described for the purpose of distending the air-bag of a life-preserver, essentially in the manner described herein.

ADONIRAM CHANDLER.

Witnesses:

JOSEPH FRANCIS,  
JESSE WELLS.