

(No Model.)

G. H. C. BRUNSWIG.
LIFE BUOY.

No. 564,778.

Patented July 28, 1896.

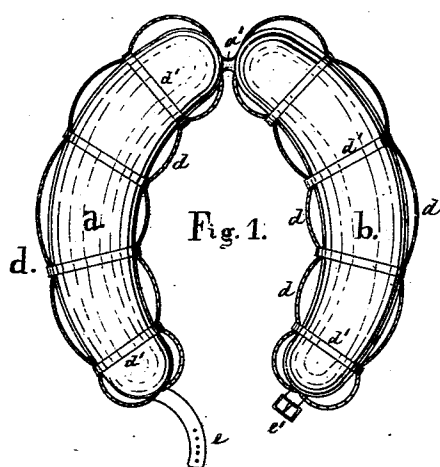


Fig. 2.

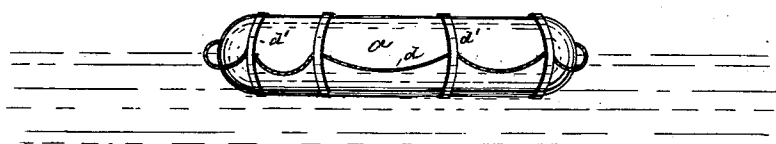
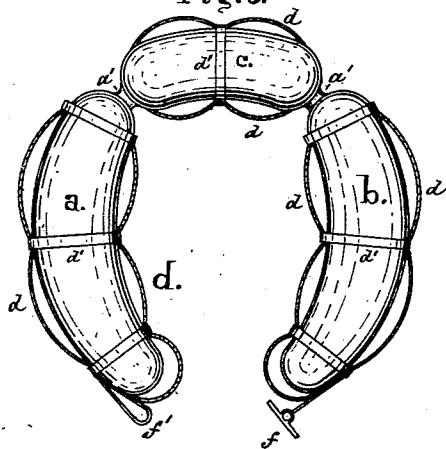


Fig. 3.



Witnesses:
Frederick Seibel.
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UNITED STATES PATENT OFFICE.

GEORG HEINRICH CARL BRUNSWIG, OF HAMBURG, GERMANY.

LIFE-BUOY.

SPECIFICATION forming part of Letters Patent No. 564,778, dated July 28, 1896.

Application filed September 6, 1895. Serial No. 561,625. (No model.)

To all whom it may concern:

Be it known that I, GEORG HEINRICH CARL BRUNSWIG, a citizen of Germany, residing at Hamburg, Germany, have invented new and useful Improvements in Life-Buoys, of which the following is a specification.

The life-buoys used at life-saving stations and on board of ship can, on account of their closed ring form, fulfil their purpose only to a very small extent, as it is very seldom that a person in danger of drowning, unless able to swim, can so get into the life-buoy thrown to him that it will support him even to the extent of merely keeping his head above water. Seizing the floating buoy at one side causes it to tilt, and consequently drowning often ensues before help can be rendered. It has been attempted by means of life-belts, life-saving waistcoats, &c., to produce efficient life-saving auxiliaries; but these cannot be thrown well, and in the water afford no hold on account of their great flexibility. Such drawbacks are entirely obviated by my invention, two forms of which are shown in the accompanying drawings.

Figures 1 and 2 are respectively a plan and a side elevation of one of them, and Fig. 3 a plan of the other.

A life-buoy according to my invention consists of two or more part rings *a b c*, that are connected with one another in a flexible manner and the free ends of which are or may be provided with fastening means, such as a strap and buckle *e e'*, Fig. 1, or a cross-piece or hook and eye *f f'*, Fig. 3.

The life-buoy is made, in the simplest manner, of an annularly-bent tube of water-proof material, which is self-sustaining to form a permanently open ring, filled with reindeer-hair, cork, or similar buoyant substance and closed at both ends. In the middle, or at two or more places, the tube is sewed through, so as to produce two (Fig. 1) or more (Fig. 3) part rings. The contracted parts *a'* of the tube thus separated by sewing possess at these seams a certain flexibility and elasticity, which, however, may, if preferred, be produced by sewing or otherwise flexibly connecting together two or more closed straight or bent flexible tubes. Around the buoy or the separate parts thereof there are attached by surrounding straps *d'* the

hand cords or ropes *d*, which render it more easy to catch hold of the buoy when it is floating. The closing means—straps, cross-pieces, or the like—provided on the free ends of the terminal parts *a* and *b* come into use only when a person jumps overboard. The life-buoy is thrown to a person in the water in an open state, and such person can pass it with facility into the ring form and put his or her arms over it on the outside or draw the buoy under his or her arms.

As the buoy always has a tendency to fit closely against the body, it is not necessary, as practical trials have shown, that its ends should be fastened together.

The essence of my invention resides in providing a life-buoy of sections curved inwardly and united by hinges or connections which will permit said sections to move in and out in the plane in which they are curved, but will tend to restrain movement up or down out of the plane of curvature. The utility of this construction resides in the fact that when the life-buoy is thrown upon the water the hinge or connection must of necessity assume a vertical position. Thus the sections can readily be moved in or out on the top of the water to permit a person inserting himself thereinto. Moreover, since the life-buoy is inflexible, so far as vibration about a horizontal axis is concerned, its only vibration being about a vertical axis, it will have the same sustaining power as an inflexible life-buoy. I am aware that life-preservers have been made of sections hinged together so as to vibrate only in one plane, but said sections are not curved inwardly in the plane in which they vibrate. Hence when thrown onto the water they will extend flat and the hinge or connection will assume a horizontal position. I am also aware that life-preservers have been made of curved sections loosely joined together by ropes, but this construction is not suitable for a life-buoy, for said sections will not assume a suitable position, when thrown, for passing around a person's body. Moreover, each section will sink independently of the other if pressed upon.

What I claim is—

1. A life-buoy comprising a plurality of sections curved inwardly toward each other

and having connections with each other which permit them to swing in the plane of curvature of the sections, while restraining movement out of said plane, substantially as described.

5 2. A life-buoy comprising two sections curved inwardly toward each other and united by a connection which permits them to swing in the plane of curvature of the sections, while restraining movement out of said

plane, said sections, when brought together at their free ends, forming a ring to support the person buoyed, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 15 two subscribing witnesses.

GEORG HEINRICH CARL BRUNSWIG.

Witnesses:

WILHELM KOCH,
HEINRICH EGGERS.