

C. E. BEAUMONT.  
Life-Boat.

No. 198,267.

Patented Dec. 18, 1877.

Fig. 1.

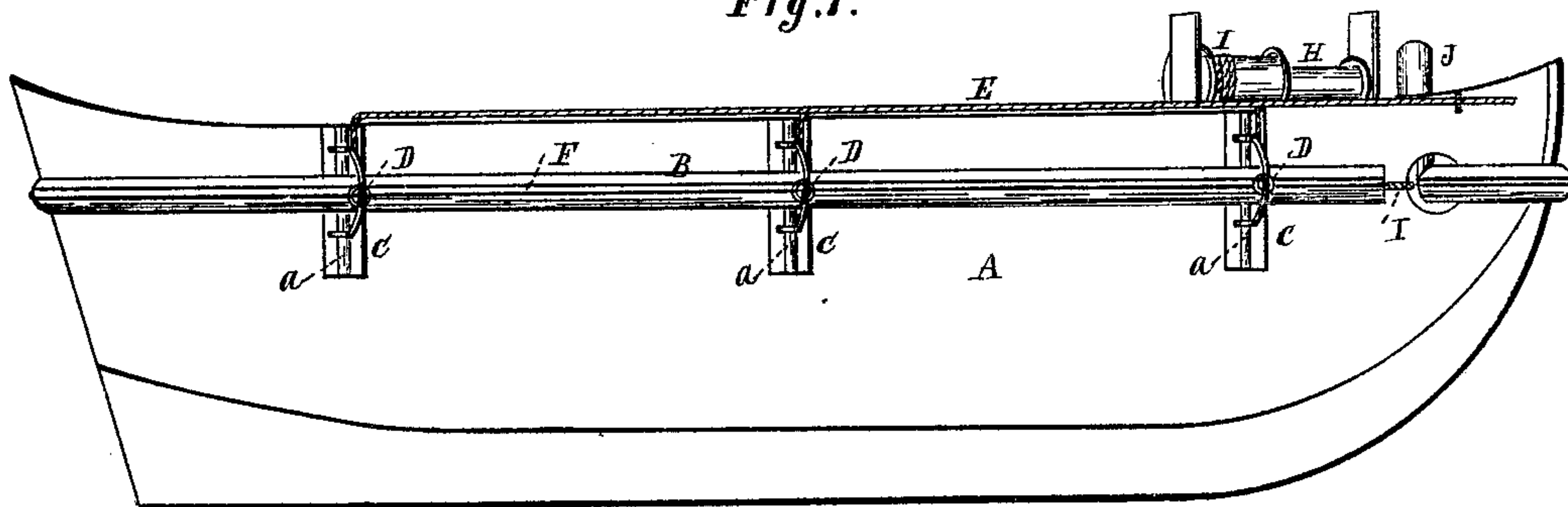


Fig. 2.

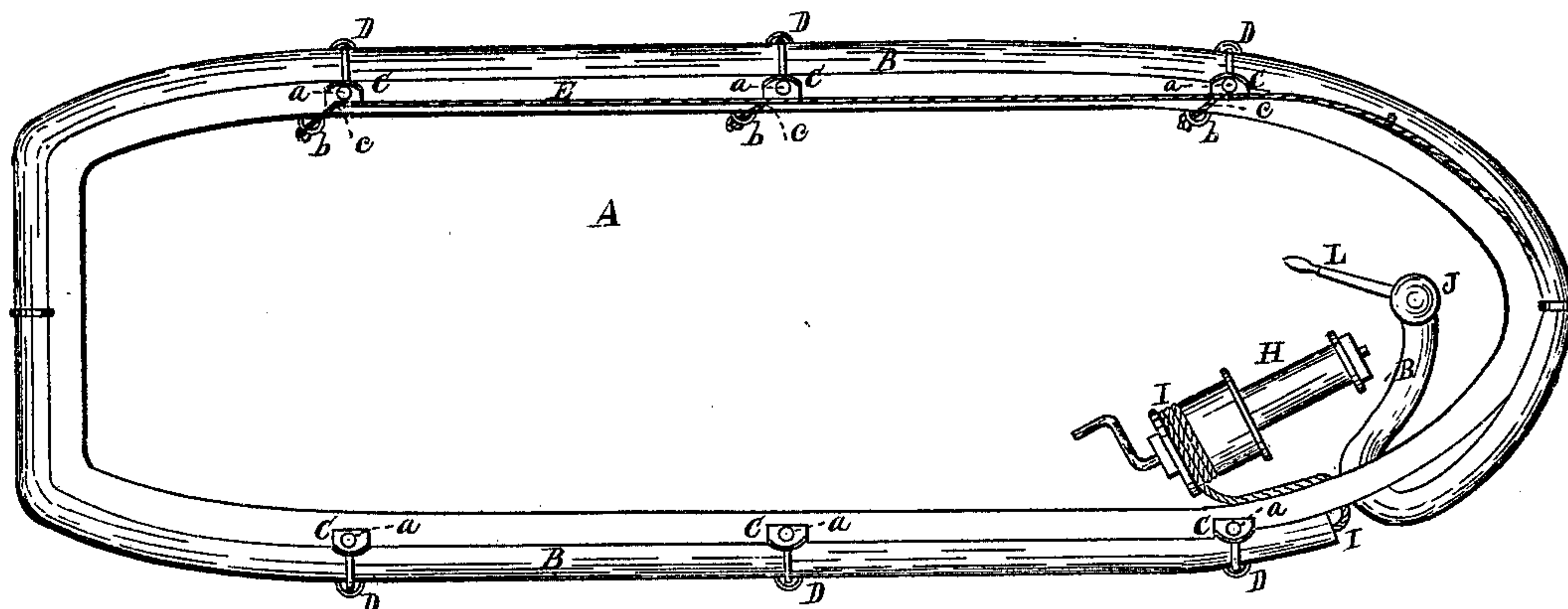
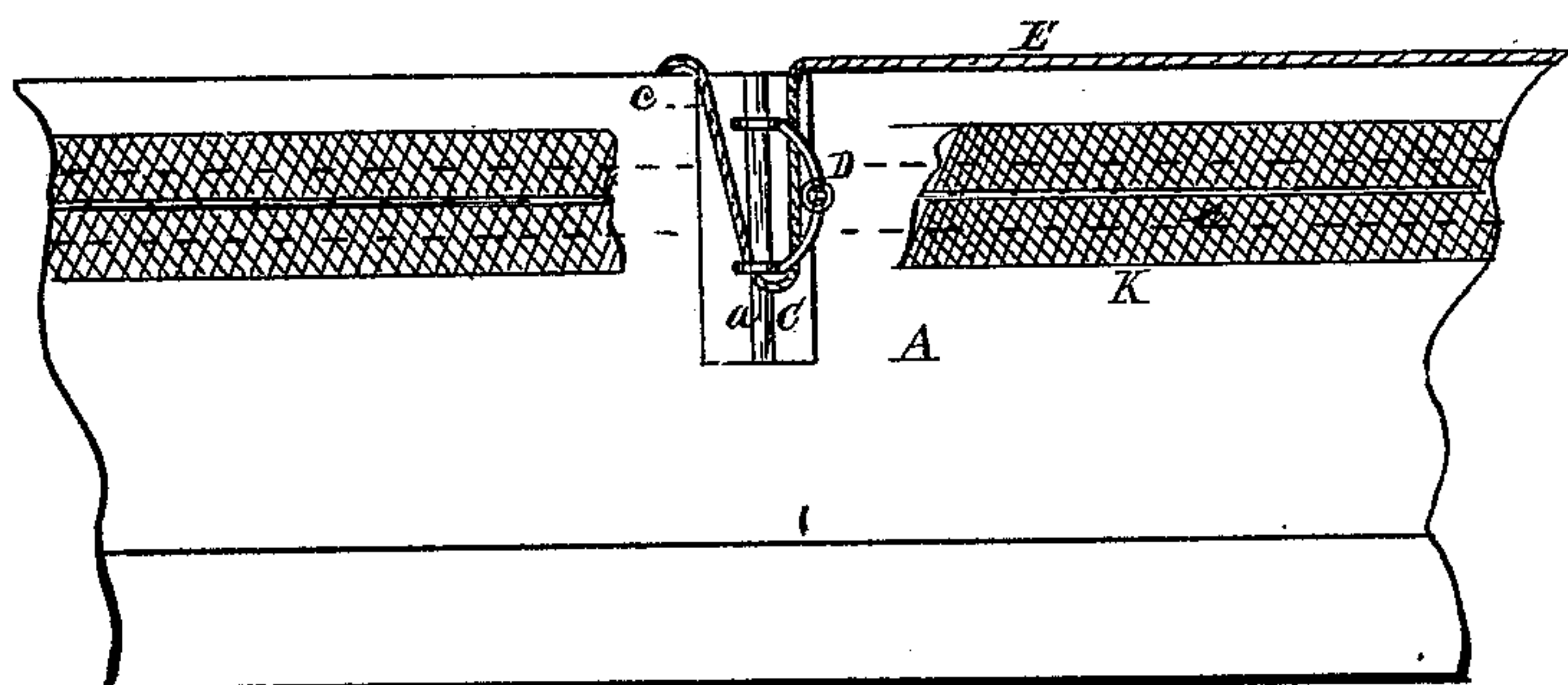


Fig. 3.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN LIFE-BOATS.

Specification forming part of Letters Patent No. **198,267**, dated December 18, 1877; application filed October 18, 1877.

*To all whom it may concern:*

Be it known that I, CORNELIA E. BEAUMONT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Apparatus for Preventing the Capsizing and Sinking of Sail-Boats, Yachts, &c., of which the following is a description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of a boat having applied thereto the above-said apparatus. Fig. 2 is a plan view of the same. Fig. 3 is a sectional view.

Like letters of reference refer to like parts in the several views.

This invention is an apparatus to be applied to sail-boats, yachts, &c., to prevent them from being capsized and from sinking.

A more full and complete description of the invention is as follows:

In the drawings, A represents the hull of a boat or yacht, which is, or may be, like those in ordinary use. Around the hull, immediately above the surface of the water, or the water-line of the boat, is secured a flexible tube or buoy, B, substantially as follows: In the sides of the hull are gains or recesses C, Figs. 1 and 3, in which are secured rods or standards *a*. To each of the standards is attached a jointed loop, D, through which passes the above-said flexible tube, and by which it is fastened thereto. Said loop or loops are movable on the standards, to admit of the adjustment of the tubular buoy relatively to the water-line, as to its distance therefrom. The loop may be retained from slipping too freely on the standards by any suitable device, and which, together with the tubular buoy, are moved vertically by the following device: To a staple, *b*, Fig. 2, on the inside of the boat, is secured one end of a cord, *c*. Said cord passes over the edge of the boat, and descends into the recess C, to the lower eye of the loop, through which it passes; thence upward to the edge again, at which point it is made fast to a cord, E, extending along the edge of the hull to the bow. The attachment of the cord to the loop, and its relation and direction relative thereto, will be seen in Fig. 3, showing

connection of the cord to the loop, as above described.

Extending around the hull, and coinciding with the said tubular buoy B, is a wire, F, Fig. 1. Said wire passes through the several loops, and may be secured to them or allowed to remain resting therein. Said wire is to assist in supporting the tube in position, and to which it may be loosely attached, so that the fastening may slide along the wire while the tube is being placed around the hull. H is a differential windlass, on the smaller section of which is to be wound the tubular buoy when not in practical use.

Upon the larger section of the windlass is wound a cord or rope, I, the opposite end of which is secured to the end of the tubular buoy surrounding the boat. J represents an air force-pump, which is or may be like those in ordinary use, and which, briefly, consists of a cylinder fitted with appropriate valves, piston, &c., and of which L indicates the handle thereof.

To protect the tubular buoy from being injured by collision with other bodies, it is covered by a wire netting or grating. For that purpose other suitable means may be used, or the tube may be without any such protection.

The grating is not shown in Figs. 1 and 2, but is shown in the enlarged view, Fig. 3, in which the dotted lines *e* indicate the tubular buoy, above referred to, covered by the grating K, a portion of which is represented as broken away from over the cord and standard in the recess C, that said cord and standard may be seen.

Having described the construction and arrangement of the aforesaid apparatus, the following is a description of its practical operation.

In the drawings, and as above described, the tubular buoy is shown as when it is in practical use, and in which it will be observed that one end of the tube is attached to the windlass by the intervention of a cord, I, whereas the opposite end of the tube is secured to the air force-pump above alluded to. By means of the said pump air is forced into the tubular buoy, which is thereby inflated, causing it to



be more buoyant than it otherwise would be without the use of the pump.

It will be obvious that in surrounding the vessel with an inflated tubular girdle or buoy, as above set forth, the boat cannot be easily capsized, as the inflated or expanded tube will buoy it up when the vessel is so far careened as to bring the buoy to the water.

In the event the hull or boat is not low set in the water, the tubular buoy can be lowered on the standards, and brought as near the water-line as may be desired, and thus prevent the boat from careening too far for safety. On the contrary, should the vessel be much loaded, consequently sitting low in the water, the inflated tube can be elevated by pulling upon the cord E, to which the cords *c c* are attached, in which position it is retained by making fast the cord E to a belaying-pin or otherwise. By this means the tube can be easily and readily adapted to the condition of the boat as to its sitting high or low in the water.

When the buoy is not needed it can be removed from around the boat by detaching the end thereof from the pump and securing it to the windlass, on which it may be wound. While the tube is being wound up, the cord I unwinds, thereby allowing the tube to be drawn along the wire or guide F, to be coiled upon the windlass. By means of said cord I the tube can be drawn from the windlass around the hull, using for that purpose the windlass, which, as the cord winds up, the tube unwinds, and is drawn by the cord around the hull.

When the tube is removed from around the hull, the guard or grating can be doubled up upon itself, so that it may lie close to the side of

the vessel. To this end the grating is made with a joint throughout its entire length, as indicated by the line B', to permit it to fold easily. This folding of the grating is accomplished by the same means used for elevating the tube—viz., the cords *c* and E. The lower edge of the grating, being made fast to the lower part of the loop or loops, will, on being drawn upon by the cords, be raised upward under the upper part of the grating, thereby causing said grating to occupy less room in width, and to lie close to the side of the vessel. The loops, being jointed, will, on drawing the two ends together by the cords *c*, permit the extended or jointed ends to depend and hang from the standards in the recess, out of the way, and covered by the folded grating.

In the drawings one tubular buoy only is represented; but two or more may be used at the same time, and substantially in the same way.

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

1. The combination of the differential windlass H I with the cord E and flexible tube D, whereby the tube may be coiled on the windlass, or uncoiled and drawn around the boat, substantially as and for the purpose described.

2. The cords *c* and cord E, in combination with the loops D, standard *a*, and tubular buoy B, in the manner substantially as described, and for the purpose set forth.

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Witnesses:

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