

W. D. Robinson.
App'ts for Raising Sunken Vessels.
N^o 96,734. Patented Nov. 9, 1869.
Fig. 1.

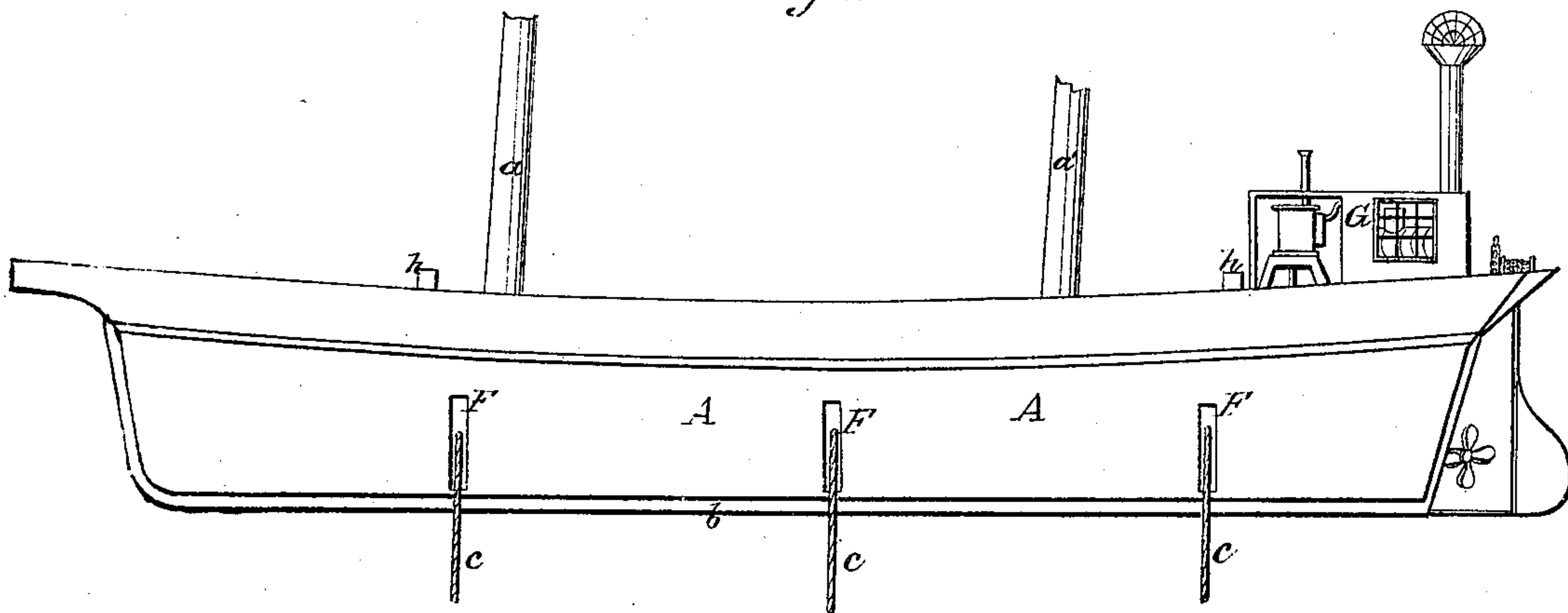


Fig. 2

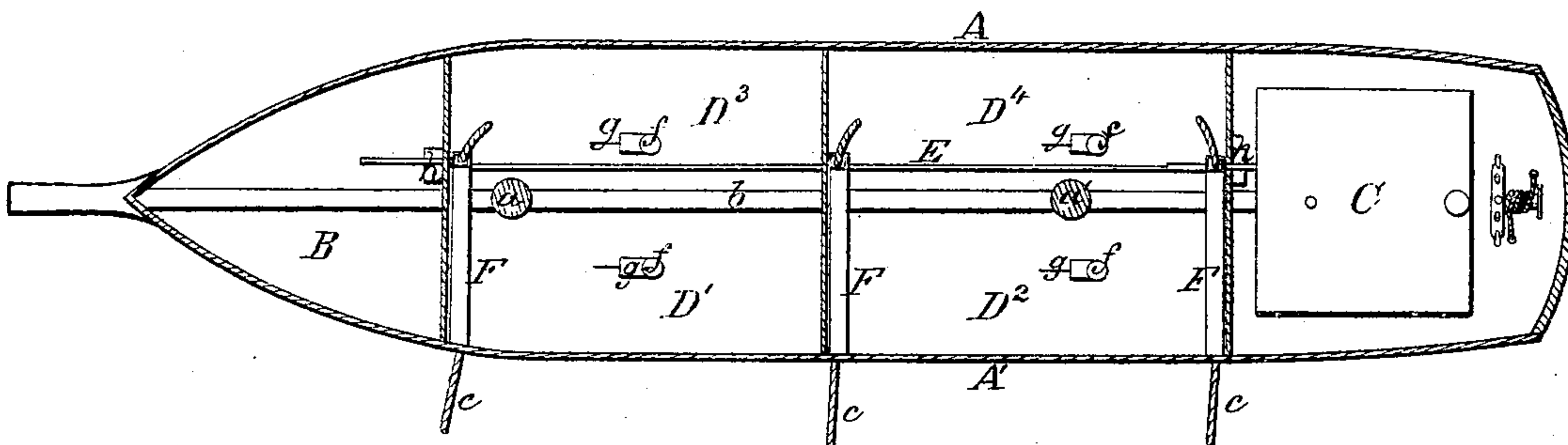
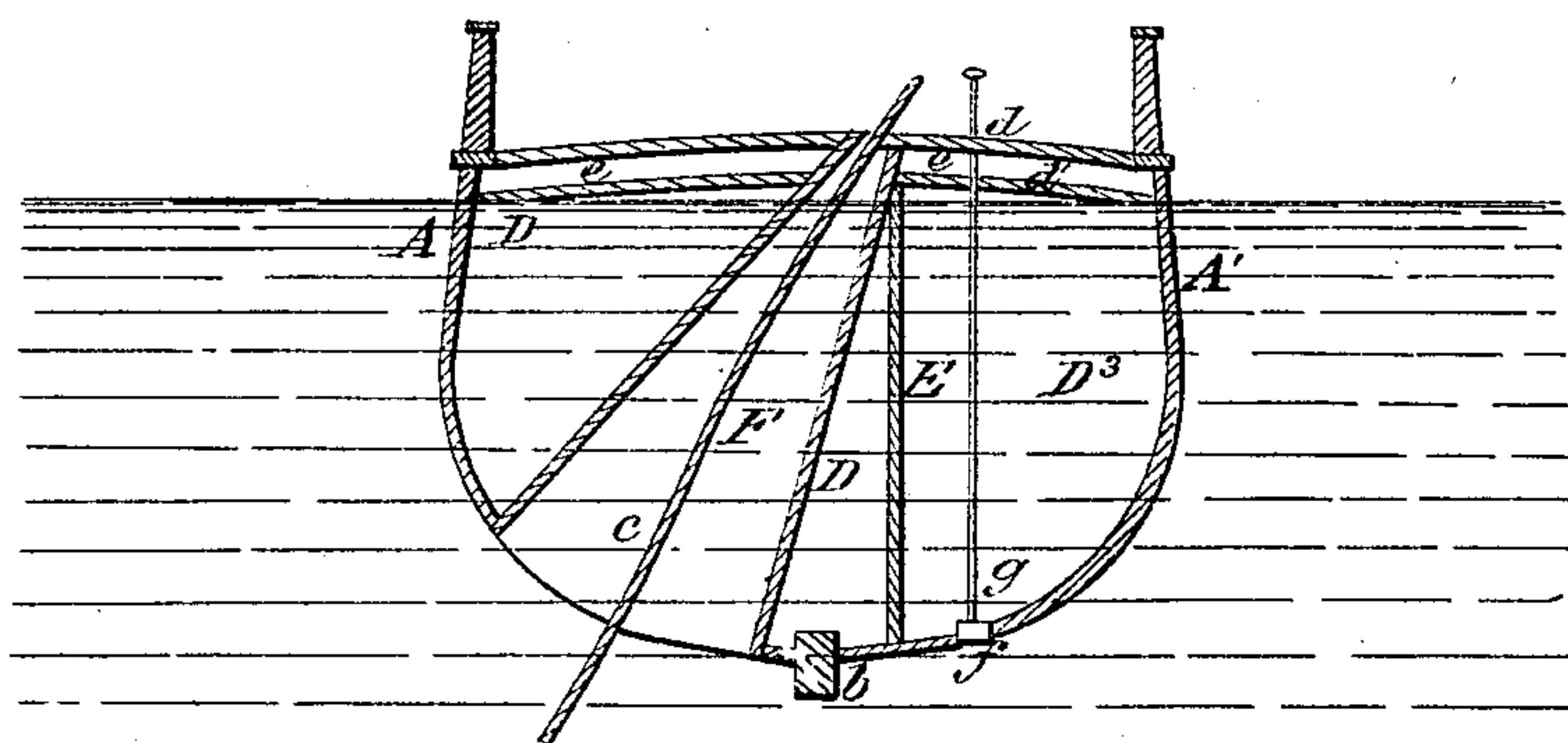


Fig. 3



Witnesses.

J. H. Drake.
C. A. Woodward.

Inventor

W. D. Robinson
J. P. Maserie
attys.

United States Patent Office.

WILLIAM D. ROBINSON, OF BUFFALO, NEW YORK.

Letters-Patent No. 96,734, dated November 9, 1869.

IMPROVED APPARATUS FOR RAISING SUNKEN VESSELS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM D. ROBINSON, of Buffalo, in the county of Erie, and State of New York, have invented certain new and useful Improvements in Apparatus for Raising Sunken Vessels; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the hull of a vessel, showing cable-openings in the side.

Figure 2 is a plan of a hull, with deck removed.

Figure 3 is a vertical cross-section, showing the vessel submerged to the double deck.

Like letters of reference indicate corresponding parts in all the figures.

My invention consists in the arrangement of an air-tight deck, the cable-compartments, and longitudinal partition, whereby sunken vessels may be readily raised.

In the drawings—

A indicates the sides of the hull of the vessel.

B, the forward, and

C, the after water-tight compartment.

a a', the masts, and

b, the keel.

D¹ D² D³ D⁴ represent the hold of the vessel, divided, longitudinally, by a partition, *E*, which is set a little distance from the keel or centre of the vessel, in order to allow the cables to lead on to the deck of the lifting-vessel, past the centre of said vessel, and also to overcome the listing of the same.

This partition comes up flush to the bottom of the air-tight deck.

On one side of each vessel employed are arranged three or more narrow cable-compartments, *F F F*, of somewhat triangular form, the apex being open at the deck, and the widest part opening through the side of the vessel, admitting the water, as clearly shown in figs. 1 and 2, through which cables *c c c* play.

These cable-compartments form an important part of my invention, and will prove extremely valuable for the purpose intended, as will be seen when their operation and use are hereinafter fully explained.

d d' represent the main deck, made double, with air-tight space *e* between.

This is also an important feature of my invention, as by it, with the water-tight compartment *B* and *C*, I expect to keep the hull afloat, even when the hold and cable-compartments are entirely filled with water.

f f show water-openings in the bottom of the vessel, and *g g*, the valves for letting in or shutting off the water.

h h indicate the position of the pumps for freeing the vessel of water, which are worked by a steam-engine, placed in a house, *G*, on the after-deck, which will always be above water when the vessel is submerged to the air-tight deck.

The disadvantage of vessels now used in wrecking or raising sunken ships, &c., is, that the cables running over the side, and attached to the wreck, have to be slipped, if the sea is rough, as the rising and falling cannot be overcome or endured. For this reason, I cut the holes *F F* in the side of the hull, and form these compartments, as described, which allow a play of the cable or chains when the waves are running sufficiently to rock the vessel.

The tops of these cable-compartments come over the centre of the vessel, as will be seen in figs. 2 and 3, which makes the lifting-power come past the centre.

These vessels will always be supplied with an engine, not only to pump, but to propel them.

The operation of raising a vessel, by my apparatus, is as follows:

Two hulls, formed as within described, and having these cable-openings on opposite sides, are placed over, one each side of the sunken craft. The vessels are then submerged to the air-tight decks, and the cables or chains are run under the vessel at the bottom, and made taut. The valves are then closed, and the steam-pumps set to work to free the vessels of water, and, as they gradually rise, they lift the sunken craft with them.

To overcome the "listing" of each vessel, in consequence of the strain on the side, the water, or enough of it, is left in compartments *D*, 3 and 4, to keep the vessels' equilibrium, and, when the strain is removed, this water is pumped out.

The vessels are started forward, until the wreck again strikes in shallower water, and then the same process is repeated.

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

The arrangement, as a whole, consisting of the air-tight deck *d d'*, the cable-compartments *F F*, and the longitudinal partition *E*, the whole operating in the manner and for the purpose specified.

In witness whereof, I have hereunto signed my name, in the presence of two subscribing witnesses.

W. D. ROBINSON.

Witnesses:

J. R. DRAKE,

ALBERT HAIGHT.