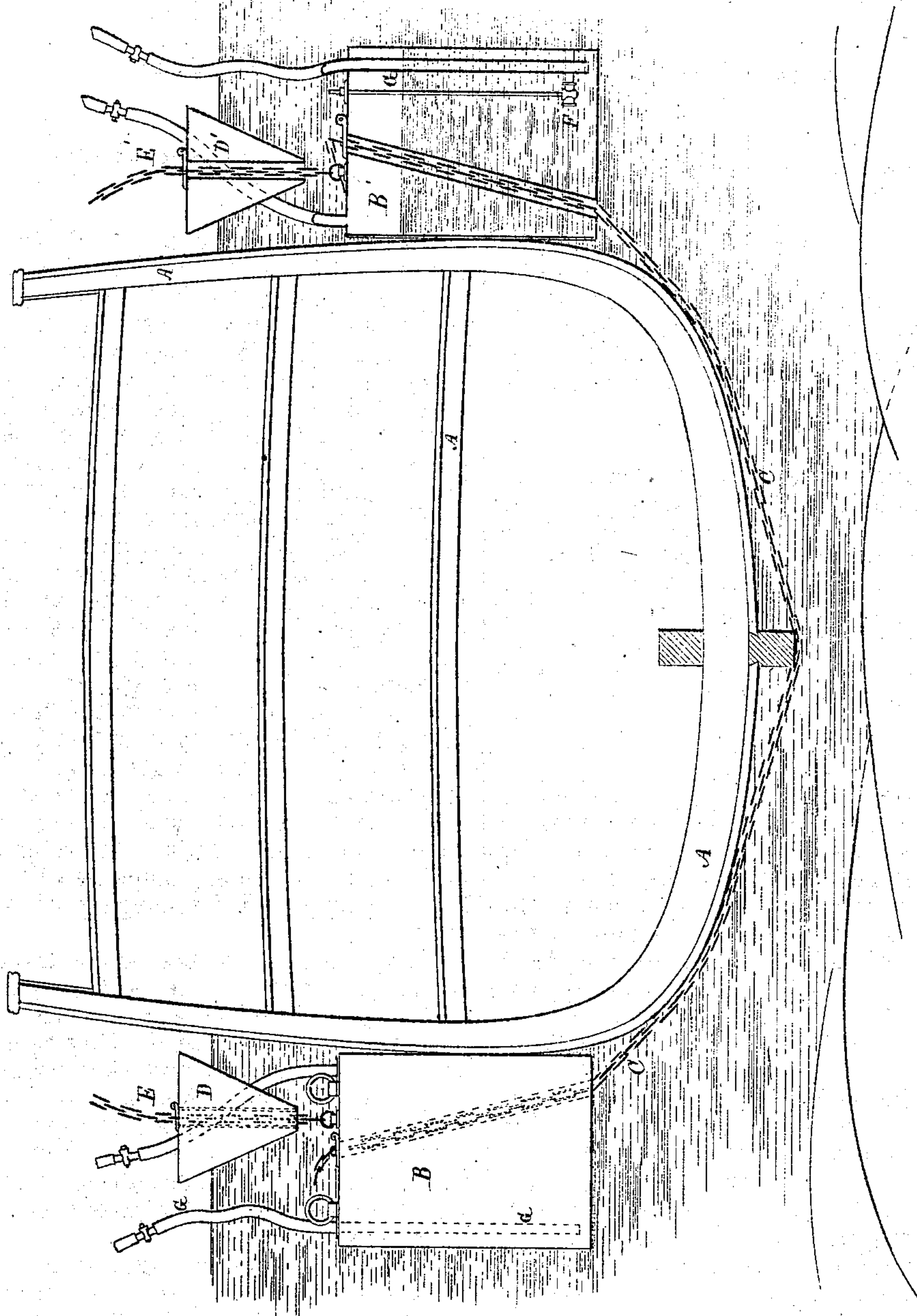


R. W. HALLETT,
Raising Sunken Vessels.

No. 136,832.

Patented March 18, 1873.



WITNESSES.

E. V. Eliot
Saml. F. Hay



Richard W. Hallett

INVENTOR.

UNITED STATES PATENT OFFICE.

RICHARD W. HALLETT, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN RAISING SUNKEN VESSELS.

Specification forming part of Letters Patent No. 136,832, dated March 18, 1873.

To all whom it may concern:

Be it known that I, RICHARD W. HALLETT, of Brooklyn, E. D., county of Kings and State of New York, have invented certain Improvements in Lightering Apparatus for Ships, &c., of which the following is a specification:

Nature and Object.

This invention consists in the combination of regulating-floats with the buoys or lightering-tanks, whose displacement lifts the vessel in such a manner that said floats shall determine the depth to which the buoys or tanks may be sunk, so that any required depth may be given to the tanks previous to their connection with the vessel, and at the same time be prevented from sinking to the bottom.

Drawing.

The letter A in the drawing, represents a cross-section of a vessel, upon the sides of which are lashed the tanks or buoys B B' by chains or a chain, as at C, attached to each of the tanks and passing around underneath the bottom and the keel of the ship, and by the displacement of said tanks the vessel is lifted or "lightered" to such a degree as to be carried over said bars or other obstructions. But in order to obtain the full lifting capacity of the tanks it is necessary that they shall be sunk to the full extent of their displacement, and to maintain they must also be sunk to as great or greater depth below the surface as the vessel is to be lifted, otherwise, when they begin to rise above the surface they begin to lose their lifting power. It is also necessary, for the saving of time, that said tanks should not be permitted to sink to the bottom, but be maintained at about the proper depth for the chains C to swing easily under the vessel, due allowance being made for her breadth of beam, so that the tanks may be towed along on each side in about the position to begin the operation of lightering as soon as the vessel approaches the bar or obstruction. To secure these advantages each tank is provided with

a regulating-float, as at D D', which have sufficient sustaining capacity to sustain the weight of the tanks B B' when filled with water, and maintain them at any desired depth. To these floats the tanks are connected by chains or other regulating attachment, as at E E', by which the depth of the tank may be graduated before any connection is made with the vessel—the simplest manner being by slipping a "toggle" or pin through the links, as represented in the drawing.

It is preferable to make said floats with a cross-section of triangular form, as shown at D D', as thereby the upper side can always be kept uppermost, and the chains that connect them with the tanks may pass through tubes extending vertically through them.

Similar tubes may also extend through the tanks, but in the direction of the force to be exerted. The tanks may also be provided with compartments into which the water cannot enter; said compartments having sufficient displacement to equalize the weight of the tank itself, and thereby dispense with the useless charging and discharging of so much water.

Valves as at F, where one of the tanks is shown in section, may be used to let the water into it; but a tube as at G, for the outlet of the water or air, as desired, may be extended up above the surface, and be furnished with a stop-cock, so that a hole may be left in the bottom for the free passage of the water.

These devices, however, as also the construction of the tanks, are all well known and do not form a part of this invention; but

I do claim—

In an apparatus for lightering ships and other similar vessels over bars and other obstructions, the combination of the regulating-floats with the lightering-tanks, substantially as described and for the purposes set forth.

RICHARD W. HALLETT.

Witnesses:

E. N. ELIOT,
A. MOORE.