

J. E. GOWEN.
APPARATUS FOR RAISING VESSELS.

No. 110,564.

Patented Dec. 27, 1870.

Witnesses.

Freeman H. Slater
Edward Griffith

John Emery Gowen

by his Attorney
Frederick Curtis

Fig. 2.

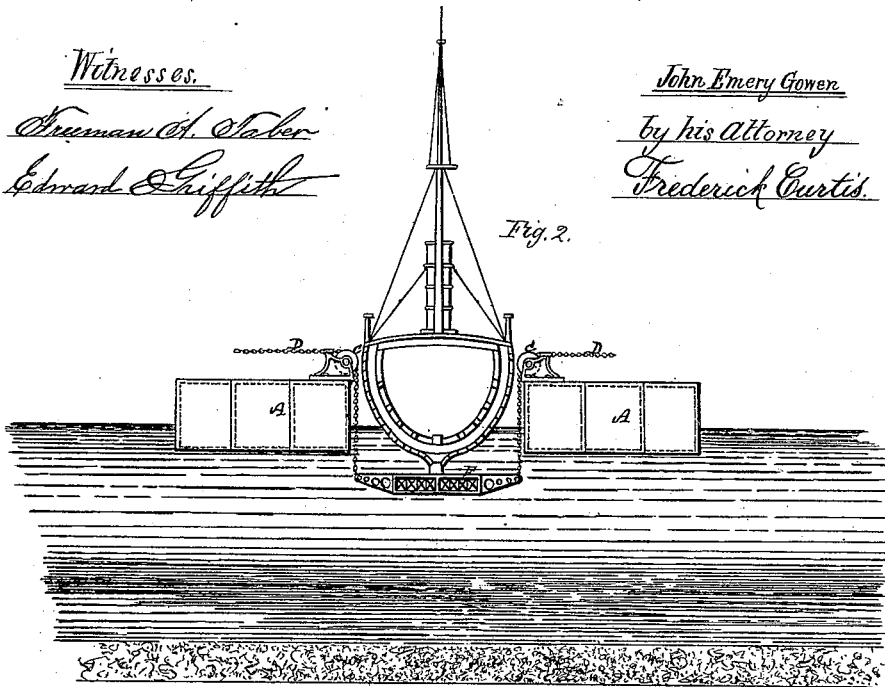


Fig. 3.

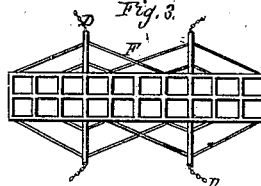
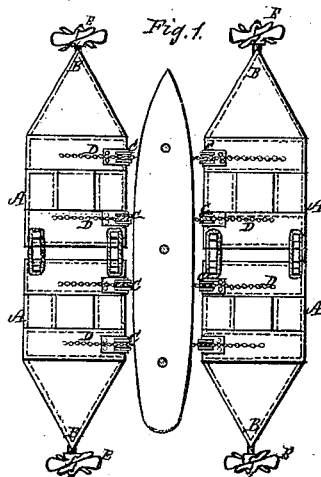


Fig. 1.



United States Patent Office.

JOHN EMERY GOWEN, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 110,564, dated December 27, 1870.

IMPROVEMENT IN APPARATUS FOR RAISING VESSELS.

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

To all to whom these presents shall come:

Be it known that I, JOHN EMERY GOWEN, at present residing in Boston, in the county of Suffolk and State of Massachusetts, have made an invention of certain new and useful Improvements in Means for Raising and Propelling Navigable Vessels; and do hereby declare the following to be full, clear, and exact description thereof, due reference being had to the accompanying drawing making part of this specification, and in which—

Figure 1 is a plan of a navigable vessel and four caissons, arranged as contemplated by my invention; and

Figure 2, a representation of the same as contained within a body of water;

Figure 3 being a perspective representation of the trussed platform, to be hereinafter mentioned.

The improvements herein embodied have reference to the construction and equipment of a class of floating-docks or caissons employed in pairs in buoying or raising sunken navigable vessels, and relate to means whereby such docks may be adapted not only to perform this duty of raising sunken vessels, but to tow or propel the same or floating vessels to any desired locality, one purpose of my present invention being to transport vessels of large tonnage over bars or shoals which would otherwise present an impassable barrier to their progress.

These improvements will be found to consist of a trussed or latticed platform or stage, in combination with each pair of caissons employed, the said platform being placed below the keel of the vessel and serving to buoy and support such vessel and permit it, when desirable, to be towed to any position.

The system of raising vessels to which these improvements may be said to bear some relation is that shown and described in Letters Patent of the Kingdom of Great Britain numbered 3,697, and issued to me on the 30th day of December, 1867, in which floating caissons are employed, which are disposed above a submerged vessel in such a manner that each end of said vessel, when the same is being raised, is supported by chains suspended from two caissons, the raising of the vessel being effected either by hoisting machinery, hydraulic or otherwise, carried by caissons, or by filling the latter with water and thus submerging them to a given depth, and afterward expelling the water contained in them, and, by means of their buoyancy, raising them and the vessel together.

The drawing accompanying this specification represents at A A' two floating-docks or caissons of a rectangular oblong form, with one end pyramidal or pointed in form, as shown at B, to produce a stem, such caissons being composed of wood or iron, or both, as practice may determine best.

As the peculiar construction of these caissons, (with the exception of the pointed or converged end,) and their outfit form no part of these improvements, and as the system of operating with them has been elaborately explained in the British Letters Patent before named, I shall in this specification give no particulars of their general organization or adjuncts, except to say that each is to be provided upon one side with two or more pulleys, C C, over which pass the chains D D, which extend beneath the sunken vessel, and are operated from two opposite caissons in a manner to effect the elevation of the said vessel.

The annexed drawing represents, at E, a screw-propeller of any suitable construction disposed at the apex of the prow of each caisson, and driven by a suitable engine placed in or upon such caisson, the shaft of each propeller being in alignment with the greatest axis of the caisson.

In practical use of my invention, and when operating upon a vessel of a weight exceeding a thousand tons, I moor above such vessel, if sunken, or upon opposite sides thereof, if floating, four caissons, with their square ends or stems in proximity to each other, and their propeller-shafts in parallelism with the axis of the vessel.

By this disposition of the caissons each becomes an assistance to the other when jointly propelling a vessel, since, while the propeller of the rearward caisson is driving itself and the vessel, the propeller of the forward caisson, revolving in a reverse direction, operates as a draft-power upon itself and the vessel.

A still further and additional means of propulsion is found in the propelling power of the vessel itself, should this power be in a working condition, while the rudder of such vessel serves to guide the direction of the whole, in conjunction with the rudder of such caisson.

The two caissons upon each side of the vessel are to be lashed or secured together in a proper manner.

As before premised, I have, by means of my present invention, so constructed and equipped a floating caisson as to convert it into a propeller, by whose aid vessels may be elevated in the water and transported in this condition over bars or shallows.

When thus operating, I prefer to employ, in place of a number of chains passed below the keel and about the hull of the vessel, as now used in raising wrecks, a rectangular open trussed platform or stage, shown at F in the drawing, which is suspended from the chains D, hereinbefore mentioned, and introduced beneath the keel of the vessel, one platform being employed with every pair of caissons, the vessel being first elevated from the mud before introducing the platform.

As this platform is raised by the elevation of the

caissons to which it is attached by means of the chains, and in manner as stated, the vessel resting upon such platform, is necessarily elevated with it to any desired or given extent; and, if the subject to be operated upon is a floating vessel, to be somewhat elevated and propelled over shallows, the action of the invention is effective and beneficial.

Claim.

I claim—

In combination with two or more floating caissons

for buoying a navigable vessel, suitable barred or trussed platform, or their equivalents, for supporting or partially supporting the weight of the vessel where the said platform is suspended from the caissons by means of chains, or their equivalents, and the whole operating as explained.

JOHN EMERY GOWEN.

Witnesses:

FRED. CURTIS,

EDWARD GRIFFITH.