

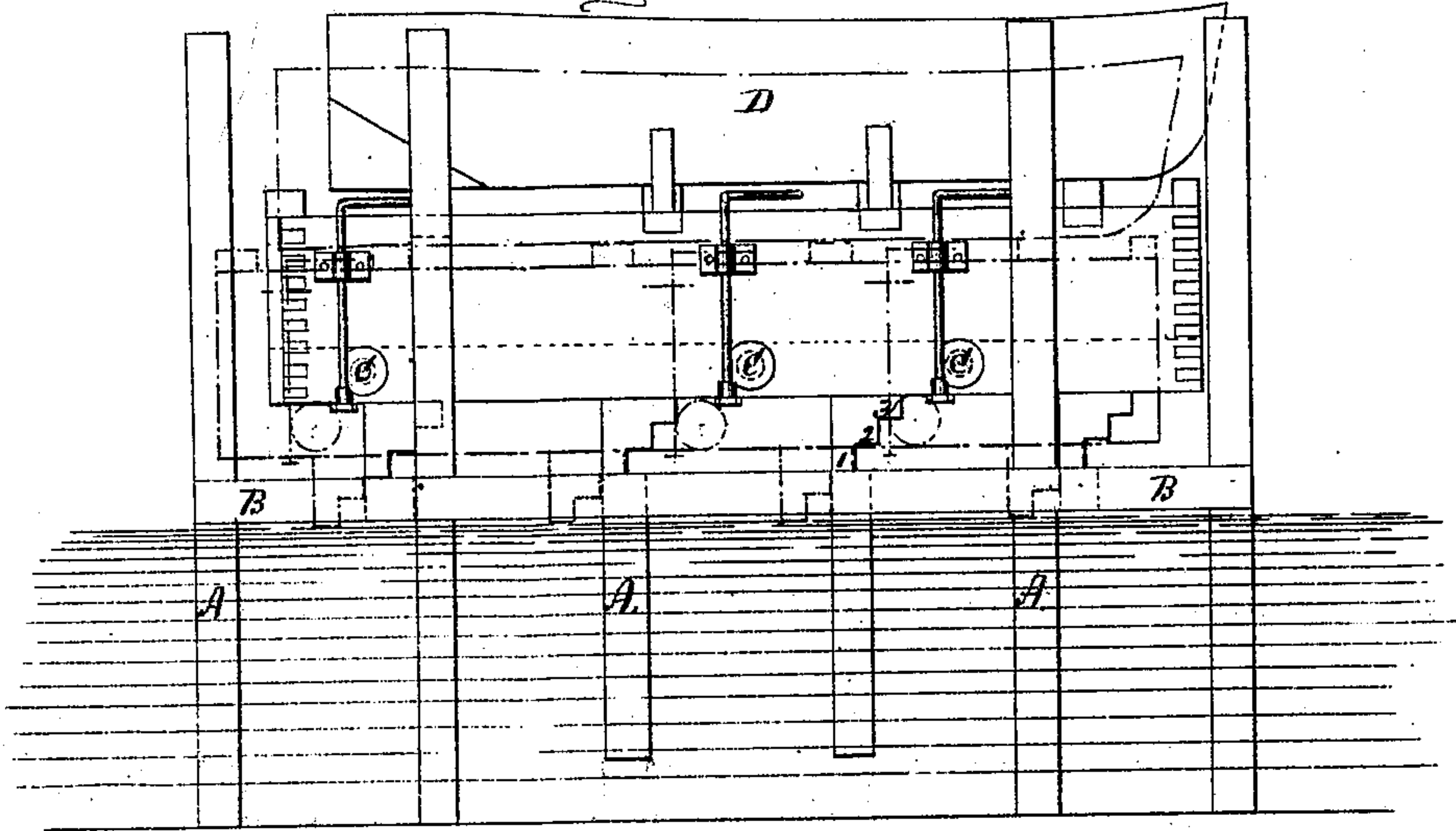
*G. H. Ferris,*

*Dry Dock.*

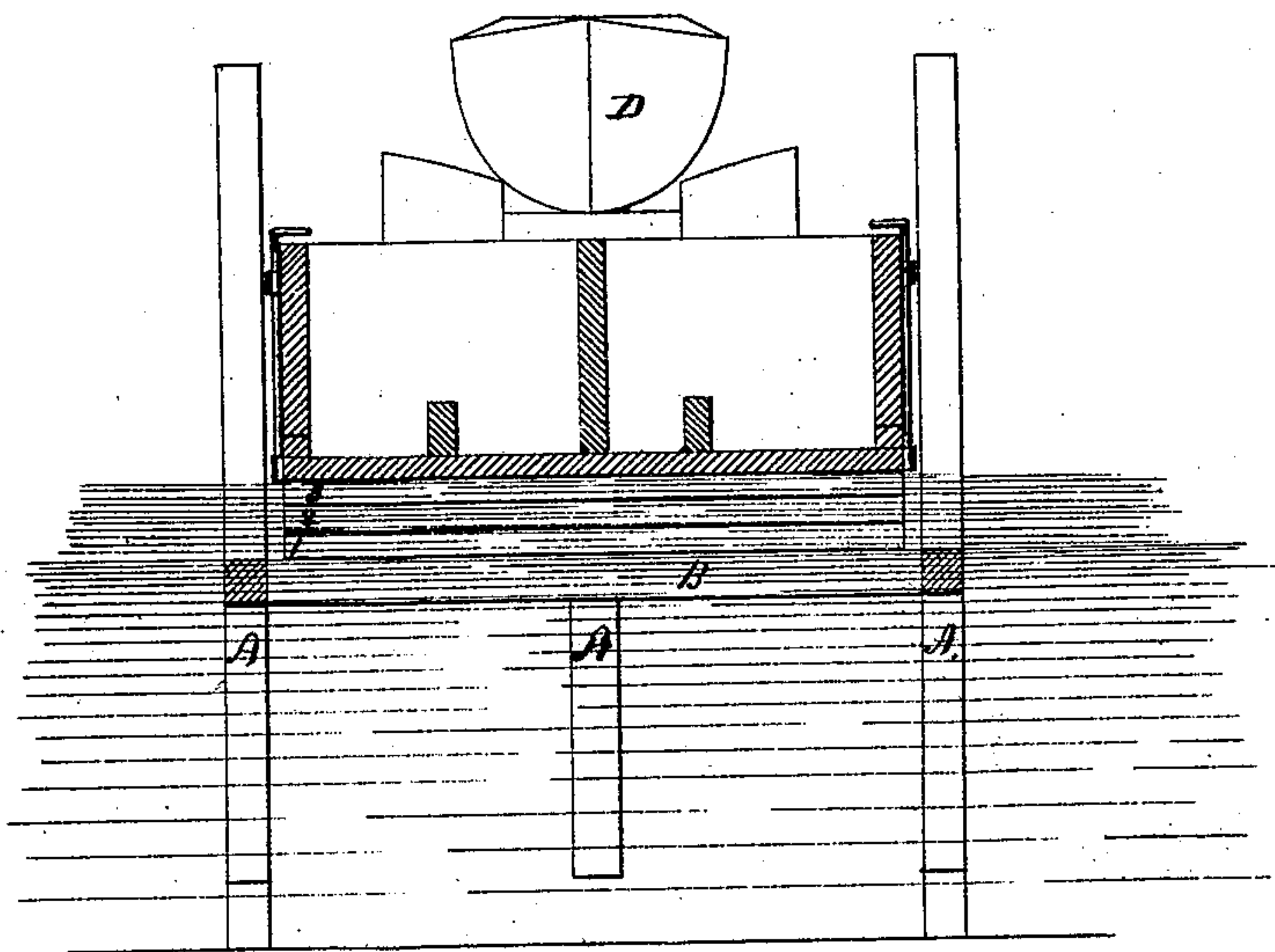
*No. 104,843.*

*Patented June 28, 1870.*

*Fig. 1.*



*Fig. 2.*



*Witnesses:*  
*G. Mathys.*  
*Charles Hoyerhofer*

*Inventor:*  
*Gilbert H. Ferris,*  
*by B. F. James,*  
*att.*

# United States Patent Office.

GILBERT H. FERRIS, OF BROOKLYN, NEW YORK.

Letters Patent No. 104,843, dated June 28, 1870.

## IMPROVEMENT IN DRY-DOCKS.

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, GILBERT H. FERRIS, of the city of Brooklyn, county of Kings and State of New York, have invented a new and useful Improvement in Dry-Docks, or the Method of Docking Vessels; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, in which—

Figure 1 is a side view, showing the form and construction of the dock, the floating dock or caisson, and the hull of a vessel upon the same, and

Figure 2 is a cross-section, through the center of fig. 1.

The nature and object of my invention consist in the construction of a dock and caisson or float, by which vessels of a light draught can be easily raised from the water for the purpose of being repaired, employing and utilizing the power and force of the tides to accomplish such a result, by means of my invention.

In fig. 1—

A A A, &c., are piles, driven into the water a sufficient distance from the shore to admit of two parallel lines of piles being formed of a width sufficient to receive a vessel between them.

These piles extend a sufficient distance into the water to allow of the adjustment of the cross-beams B B, with which they are firmly connected at a point or points upon such piles as shall be below tide-water, and allow the caisson or floating dock to ride easily between the piles.

This caisson or floating dock is divided into sections or water-tight compartments, and is filled with water and caused to rest upon the cross-beams B B, so that, at low tide, there may be sufficient depth of water above the caisson or floating dock to allow a vessel to float in between the piles and upon the same.

On the under side of said caisson or floating dock are constructed ribs or projections, of timber, transversely across its bottom, as shown in the drawing, resembling, somewhat, steps. These steps may be of any number, the aggregate of which shall not exceed the number of feet and inches of the rise of the tide at the point where the dock is constructed.

Thus, when the tide rises, the caisson or floating dock rises with it, and the steps are caused to rest upon the cross-beams B B, the beams and steps being arranged and constructed for that purpose of adjustment.

When the tide is at its full height, the caisson or floating dock will rest upon the bottom of step 1 upon the beams B B, &c.

The valves C C C, &c., in the caisson or floating dock, are then opened for the escape of water within it, and the vessel then is in a condition to repair upon the receding of the tide.

When the repairs are completed, the caisson can be filled again with water, if desired, and at ebb-tide floated down to its original position, and the vessel removed.

The caisson can be fastened in any suitable way to the piles, to prevent its being moved or affected by the tide in any injurious manner.

By this mode of arrangement a very cheap and convenient method of repairing vessels, particularly of small tonnage, is supplied, and a comparatively small number of hands is required to be employed.

D represents the boat or vessel resting upon the caisson or floating dry-dock.

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

1. The construction and arrangement of a caisson or floating dock, having formed upon its bottom side the ribs or steps 1 2 3, &c., in the manner and for the purpose herein set forth.

2. The combination of piles or frame-work A and B with a caisson or floating dock, in the manner and for the purpose herein set forth.

3. The arrangement and construction of guide-piles and frame-work, in such a manner that a caisson or floating dock, upon which vessels can be placed, may be raised or lowered within and upon them by the effect of tides, in the manner and for the purpose herein described.

GILBERT H. FERRIS.

Witnesses:

EDM. F. BROWN,  
B. F. JAMES.