

E. L. Brady.

Dredge-Boat for Excavating Rivers.

Nº 72360

Patented Dec. 17, 1867.

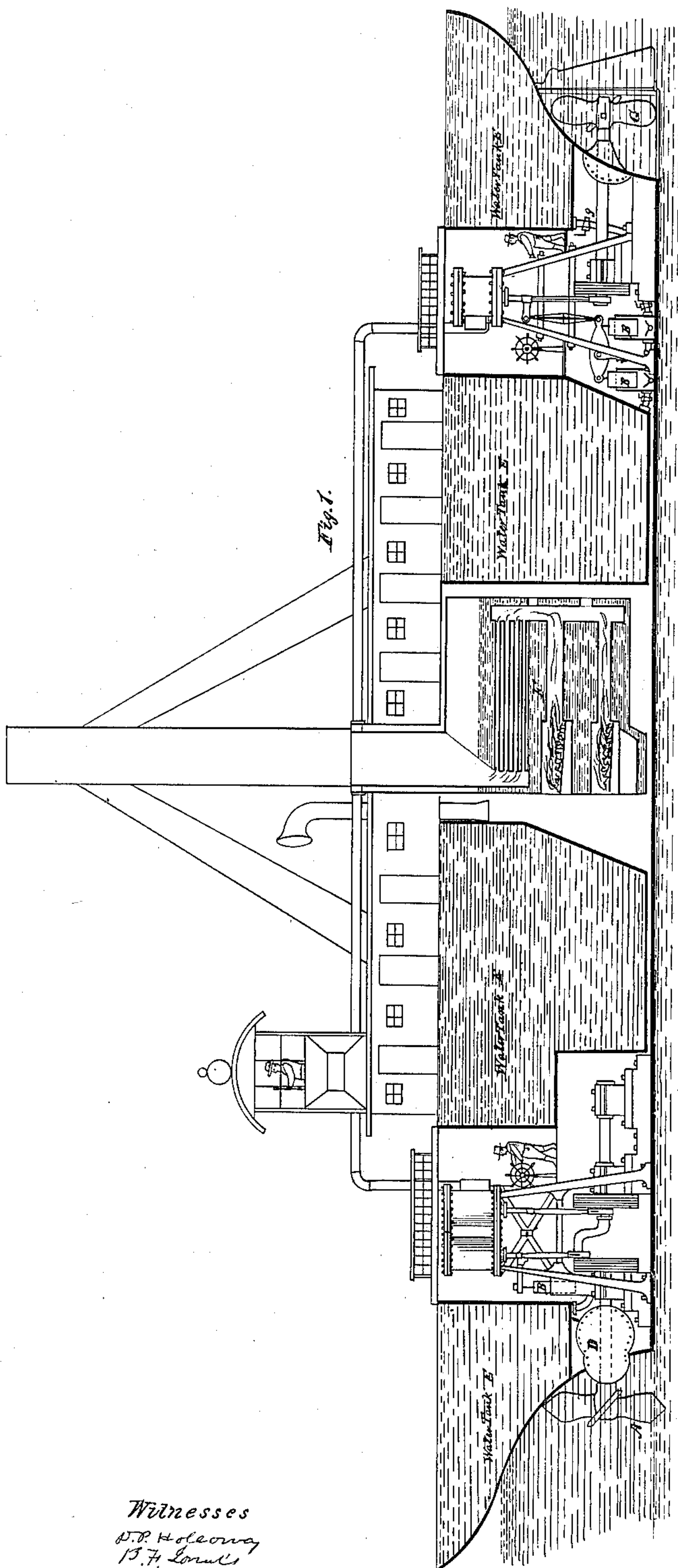
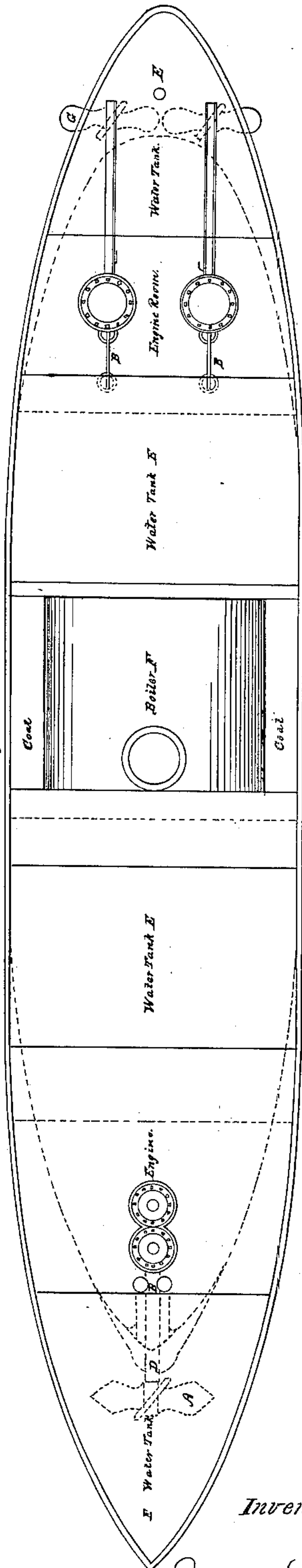


Fig. 2.



Witnesses
D. P. H. Leong
B. F. L. L. L.

Inventor.

Edmund L. Brady

United States Patent Office.

EDWIN L. BRADY, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 72,860, dated December 17, 1867.

IMPROVED DREDGE-BOAT FOR EXCAVATING RIVERS.

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, EDWIN L. BRADY, of New Orleans, in the parish of Orleans, and State of Louisiana, have invented a new and useful Improvement in Boats for Dredging under Water; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a vertical longitudinal section, and

Figure 2 is a horizontal section.

The same letters are employed for the designation of the same parts in both figures.

This excavator consists of a strong boat, propelled by one or two propellers placed in the stern of the boat. I prefer two propellers, as affording greater power and rendering the boat more manageable in steering in crooked channels. This propeller is drawn in the ordinary manner, by steam-engines of ordinary construction. Near the bow of the boat I place another steam-engine, driving what I call the "mud-fan," which projects from and in front of the bow of the boat. This is formed by a set of revolving blades, shown at A, turned like the propellers by a shaft passing through a stuffing-box, D. The blades are shaped somewhat like those of a propeller, but they are sharper on their points and less inclined on their faces. These blades should extend, say, two feet below the bottom of the boat, and their object is, by their rapid revolution, to displace the sand and mud on the bottom, and stirring them up to mix them with the water so that they may be carried off by the current. The motion of the "mud-fan" tends to draw forward the boat, assisting the propellers. All the engines may be driven by one set of boilers, F, placed amidships.

In order that the "mud-fan" may be brought in contact with the bottom, I construct the boat with a series of water-tight compartments, E, placed in the bow and stern, and on each side of the centre, amidships, into which the water may be permitted to flow through pipes so as to sink the vessel to the required depth; the compartments being so placed and proportioned that the vessel shall sink with an even keel, by which the effective action of the "mud-fan," the propellers, and steering-apparatus is preserved, the boat being manageable at any depth. A large pump, B, driven by the engine, is connected by pipes with all the compartments, so that the water may be pumped out when necessary to raise the boat.

I am aware that boats have been constructed, with compartments to be filled with water, to sink the dredging-mechanism to the bottom, by loading the end of the boat in which such mechanism is placed; but this construction is subject to the disadvantage of requiring more complicated machinery for dredging, in order that it may be accommodated to the inclination of the boat; and to the further disadvantage, that the boats thus inclined are comparatively unmanageable.

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

1. A dredging-boat constructed with a series of water-tight compartments, so proportioned and arranged that, as they are filled with water, the boat shall preserve an even keel, and the dredging-mechanism be brought into action without any adjusting-devices, substantially as set forth.

2. The combination of the "mud-fan" A, attached to a rigid shaft, and a boat containing a series of water-tight compartments, E, so adjusted as to cause the boat to settle on an even keel, as the compartments are filled with water, and a pump, B, for exhausting the water from all the compartments, substantially as set forth.

EDWIN L. BRADY.

Witnesses:

R. MASON,

L. MURPHY.