

J. W. HUGHES.

Bilge-Water Valve for Ships.

No. 166,526.

Patented Aug. 10, 1875.

Fig. 1.

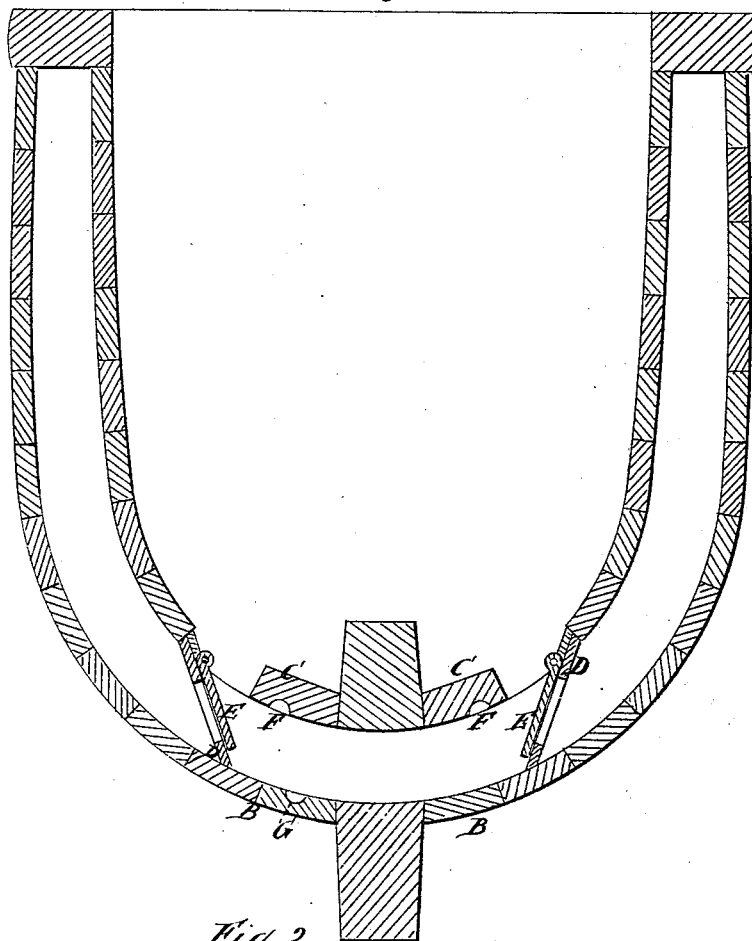
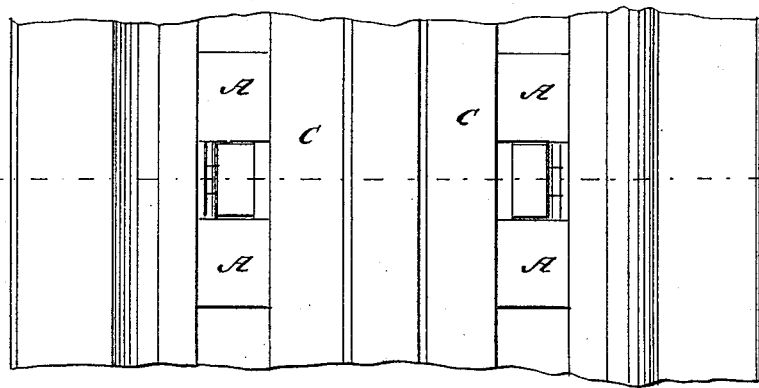


Fig. 2.



WITNESSES:

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JOSEPH W. HUGHES, OF NEWBURYPORT, MASSACHUSETTS.

## IMPROVEMENT IN BILGE-WATER VALVES FOR SHIPS.

Specification forming part of Letters Patent No. **166,526**, dated August 10, 1875; application filed May 28, 1875.

*To all whom it may concern:*

Be it known that I, JOSEPH W. HUGHES, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and Improved Stop-Water for Ships' Bilges, of which the following is a specification:

The invention will first be described in connection with drawing, and then pointed out in the claim.

Figure 1 is a transverse section of a ship having my improved stop-water and the fore and aft passages in the floor-planks, the section being taken on the line *xx* of Fig. 2; and Fig. 2 is a plan view.

Similar letters of reference indicate corresponding parts.

A represents the transverse ribs or timbers, to which the outside planking B and the inside floor-planking C are attached, and between which the bilge-water lies. D represents the stops arranged between the timbers to hold the water in the bilge; and E represents the self-closing valves, which I apply to the stops to open and let the water in freely when the ship's sides rise, and close and retain it when they fall. Without these stops

the water flows back away from the pump, which is of necessity arranged in the center, so that it sucks air only until the water comes back, thus losing much time, which in some cases of danger is of vital importance, and it also wastes power. F represents grooves in the under side of the floor-planking C, which I propose to make in addition to the grooves G, commonly used in the outside planking below the timbers, to make certain of having free passage for the water fore and aft, which the passages below do not afford, because they clog with sand and other matters collecting and remaining in them by gravity, but which cannot remain in the upper passages.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of a self-closing stop-valve, F, with the ribs A and planking B C of a ship, to retain the bilge-water in the middle of the ship, substantially as specified.

JOSEPH W. HUGHES.

Witnesses:

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