

C. LIPARELLI.
Ballast-Log for Vessels.

No. 216,424.

Patented June 10, 1879.

Fig. 1.

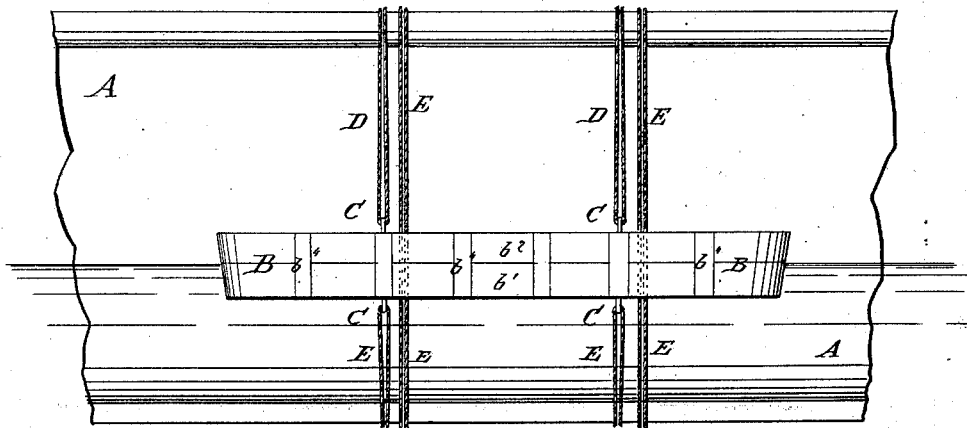
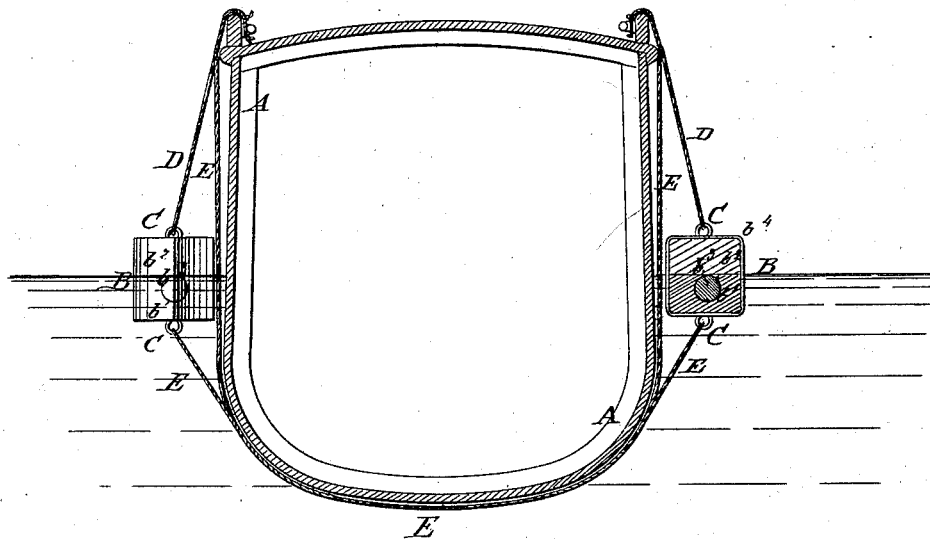


Fig. 2.



WITNESSES:

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IMPROVEMENT IN BALLAST-LOGS FOR VESSELS.

Specification forming part of Letters Patent No. **216,424**, dated June 10, 1879; application filed April 17, 1879.

To all whom it may concern:

Be it known that I, CESARE LIPARELLI, of the city, county, and State of New York, have invented a new and useful Improvement in Ballast-Logs for Vessels, of which the following is a specification.

Fig. 1 is a side view of a portion of the hull of a vessel to which my improvement has been applied. Fig. 2 is a cross-section of the same, one of the ballast-logs being shown in end view and the other in cross-section.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved means for ballasting a vessel when in port and empty, to prevent her from rolling and allow her to be moved from place to place, as may be desired.

The invention consists in ballast-logs for vessels, formed of the heavy lower part, the light upper part, the iron bar, and the bands.

A represents the hull of a vessel. B is a ballast-log, the lower part, b^1 , of which is made of heavy wood, and the upper part, b^2 , is made of very light wood or cork. b^3 is a bar of iron placed in a groove or hole in the lower part, b^1 , or partly in the lower part, b^1 , and partly in the upper part, b^2 .

The three parts b^1 b^2 b^3 are securely bound together by bands b^4 , which should be let into the log, so as to leave a smooth surface.

The ends of the logs B should be rounded off or sharpened, so as to offer less resistance to the water.

To the upper and lower sides of the forward and stern parts of the logs B are attached eyes C, which may be the eyes of eyebolts or eyes attached to or formed upon the bands b^4 .

Through the upper eyes C are passed ropes or chains D, the ends of which are secured by belaying-cleats or other suitable means to the gunwale or deck of the vessel. Through the lower eyes C are passed ropes or chains E, which are passed beneath the keel of the ves-

sel, are led up her opposite side, and are secured to the gunwale or deck of the said opposite side.

With this construction, the ballast-logs B are adjusted by adjusting the ropes or chains D, and are then secured in place by drawing the ropes or chains E taut.

The ballast-logs B are designed to be secured with the seam between the parts b^1 b^2 upon the water-line, so that should the vessel roll toward either of the ballast-logs B it will tend to draw the said log B beneath the surface of the water, which tendency will be resisted by the buoyancy of the light upper part, b^2 , of the said ballast-log B. Should the vessel roll from one of the ballast-logs B it will tend to raise the said ballast-log B out of the water, when the heavy lower part, b^1 , of the said log B will act as a weight to resist the said movement. In this way the vessel will be kept all the time level.

The two sets, D E, of ropes or chains keep the ballast-logs B in place, so that a vessel may be ballasted by a log, B, upon one side; but I prefer to use two, one upon each side, as keeping her steadier. This quality is especially valuable in case one of the ballast-logs B should be knocked off by a collision when the vessel is being towed from one place to another, the remaining log B keeping the vessel upright, so that she can be towed to the desired place in safety.

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

Ballast-logs B for vessels, formed of the heavy lower part, b^1 , the light upper part, b^2 , the iron bar b^3 , and the bands b^4 , substantially as herein shown and described.

CESARE LIPARELLI.

Witnesses:

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C. SEDGWICK.