(No Model.)

S. MENZIES.

BALLAST LOG FOR VESSELS.

No. 589,133. Patented Aug. 31, 1897.

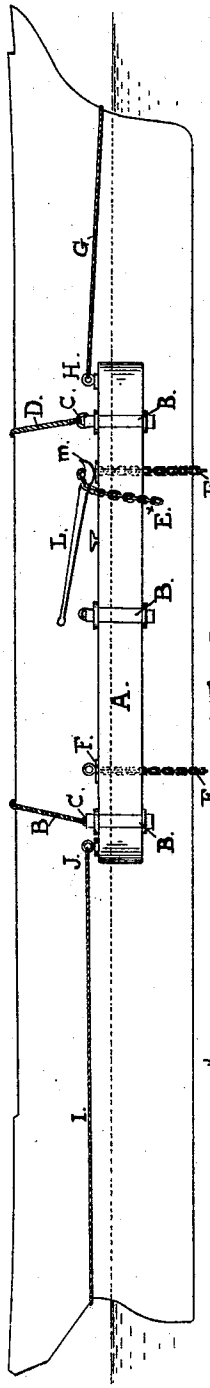


Fig. 1.

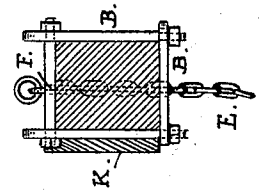


Fig. 4.

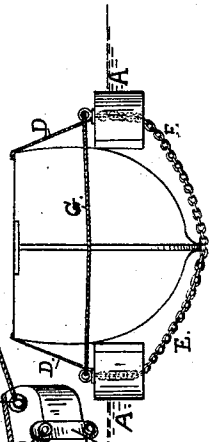
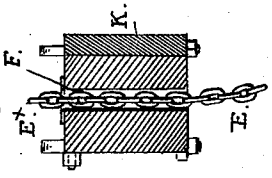


Fig. 2.



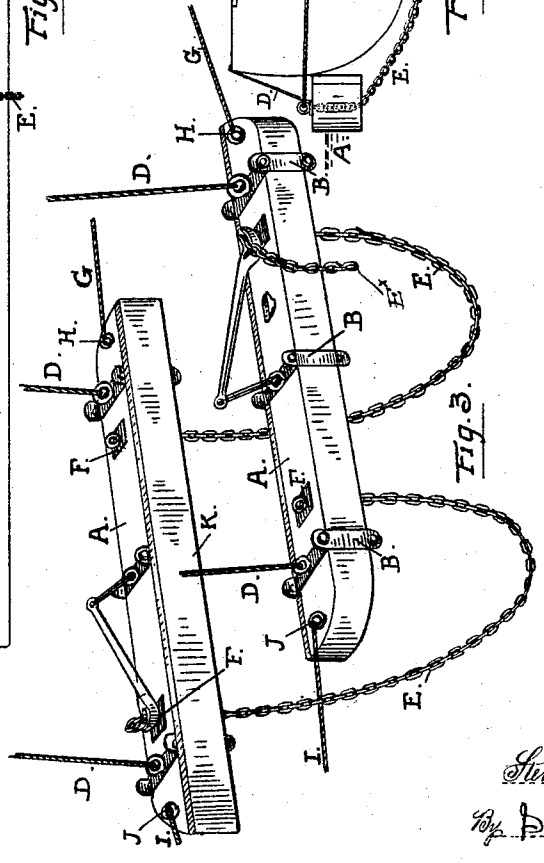


Fig. 3.

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UNITED STATES PATENT OFFICE.

STEWART MENZIES, OF SAN FRANCISCO, CALIFORNIA.

BALLAST-LOG FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 589,133, dated August 31, 1897.

Application filed April 6, 1896. Serial No. 586,398. (No model.)

To all whom it may concern:

Be it known that I, STEWART MENZIES, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented Improvements in Ballast-Logs for Vessels, of which the following is a specification.

This invention relates to improvements made in devices for ballasting a vessel in port after the cargo has been discharged and before a sufficient quantity of cargo to steady the vessel has been stowed; and the object which I seek to attain in and by the said improvement is to provide a ballast-log that will operate and serve the required purpose both while the vessel to which it is applied is being towed from place to place and when it is at anchor.

To such end and object my said invention consists in the described construction and combination of parts producing an improved ballast-log that when placed and adjusted for operation will not shift or be acted on by the movements of the vessel when under way, all as hereinafter described, and pointed out in the claims, reference being had to the drawings that accompany and form part of this specification.

In the said drawings, Figure 1 represents in side elevation the hull of a vessel having my improved ballast-log placed in position and attached for operation. Fig. 2 is an end view looking at the stem of the vessel, or the right-hand side of Fig. 1. Fig. 3 is a perspective view of my improved ballast-log. Fig. 4 is a vertical transverse section on an enlarged scale.

The logs A A are built up of heavy planks or timbers secured together by clamps B B. On the top of each log and near each end of it is fixed a heavy ring or eye C, and to these eyes are fastened ropes D D, by means of which the log A is suspended over the side of the vessel.

E E are chain cables secured to one log from the under side and passing under the keel of the vessel to the log on the opposite side, to which it is secured at a point in line with its point of attachment to the first-mentioned log. These cables E are run through holes or apertures F made for that purpose in the logs, each cable being passed through the hole in one log and through the corresponding hole in the other log from beneath upward. A ring on the end of the cable of larger size than the aperture in the log prevents it from slipping out of place, and either end can be drawn up or allowed to run through the aperture to tighten the cable or to slacken it under the vessel, or the cable is made fast at one end to one log, and at the other log it is secured by a fastening that allows the cable to be loosened and drawn up or paid out in setting and adjusting the logs to the size of the vessel and its position in the water.

The means which I provide for drawing up and securing the cable consists of the hand bar or lever L, having claws *m* on the end to grasp and hold the cable by gripping it between the links.

The claw-bearing end is curved, as shown in Fig. 3, and the opposite end is provided with an eye for tying down and securing the outer end of the bar in position. This device is operated to draw up the cable through the log by taking a grip with the claw and bearing down on the outer end of the lever, the claw-bearing end by virtue of its curved shape serving as a fulcrum and giving proper leverage for that purpose. By loosening the lever and taking a fresh grip after each pull the cable is drawn up to any desired degree of tightness, and when the logs are adjusted the cable is held by tying down the outer end of the lever L to an eye in the log, as shown in Fig. 3.

The front end of one log is connected with the front end of the other log by a cable G, carried around the bow of the vessel and secured to rings or eyes H, and the rear ends of the logs are connected in the same manner by a cable I, passed around the stern. These cables G I serve to prevent the logs from moving longitudinally out of place while the vessel is being towed or changed from one place to another, and in conjunction with the chain cables E E and the ropes D D they cause each log to control the other and both logs to maintain their relative positions at the same points on opposite sides of the vessel.

To the inner face of each log, or that side which lies next the vessel, is fastened a wearing plate K, covering the metal clamps on the log to prevent them from marring the sides

of the vessel. These planks are temporarily secured by nailing them to the face of the log and are readily replaced by new ones when worn.

In placing this apparatus in position for use the logs, previously connected together by the chain cables, are floated from one end of the vessel into position, with the cables E passing under the keel, after which the ropes D D are drawn up and made fast on the deck and the fore and aft cables G I are dropped into position or are passed around the bow and the stern and secured to the rings H J on the logs. The cables E are finally drawn up to bring the logs up against the sides of the vessel and take up the slack.

When thus applied, the apparatus will maintain its working position during all movements of the vessel. The logs will not be affected by any listing or rolling of the vessel, for the buoying effect of one log is always controlled and is added to by the other, to which it is positively connected by the chain cables, and the movements of the vessel through the water in being towed from one berth to another or in being shifted in position will not change the position of the logs, as they control each other through the fore and aft cables.

With this apparatus I am able to move an unloaded vessel with safety from one berth to another and to tow an empty vessel to a considerable distance.

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

1. The herein-described apparatus for ballasting unloaded vessels in port, consisting of the ballast-logs A A, the chain cables E E passing through holes in the logs and loosely connected to said logs to be shortened or extended in length from one log to the other under the keel of the vessel, the claw-bar or lever L as a means for drawing up said cable through the hole in one log and securing it to the log, the suspending-ropes D D and the fore and aft cables G I connecting the said logs together around the bow and the stern, respectively, of the vessel, for operation as set forth.

2. The combination of the ballast-logs, formed of planks secured together by clamps B B and the removable wearing plates K on the inner face of the logs covering the clamps, said logs having holes running vertically through each log near the ends thereof, the chain cables passed through said holes from beneath upward and loosely attached to the log, whereby the said cables can be taken up and tightened, the suspending-ropes D D and the fore and aft cables G I connecting the front ends and the rear ends of the said logs around the bow and the stern of the vessel respectively, constructed and arranged for operation as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

STEWART MENZIES. [L. S.]

Witnesses:
C. W. M. SMITH,
N. E. W. SMITH.