

(No Model.)

C. H. BRIGGS.
LEAK ALARM.

No. 511,041.

Patented Dec. 19, 1893.

Fig. 1.

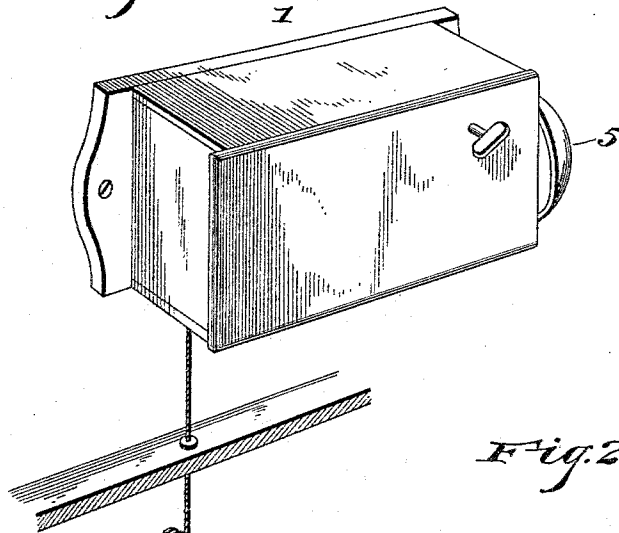
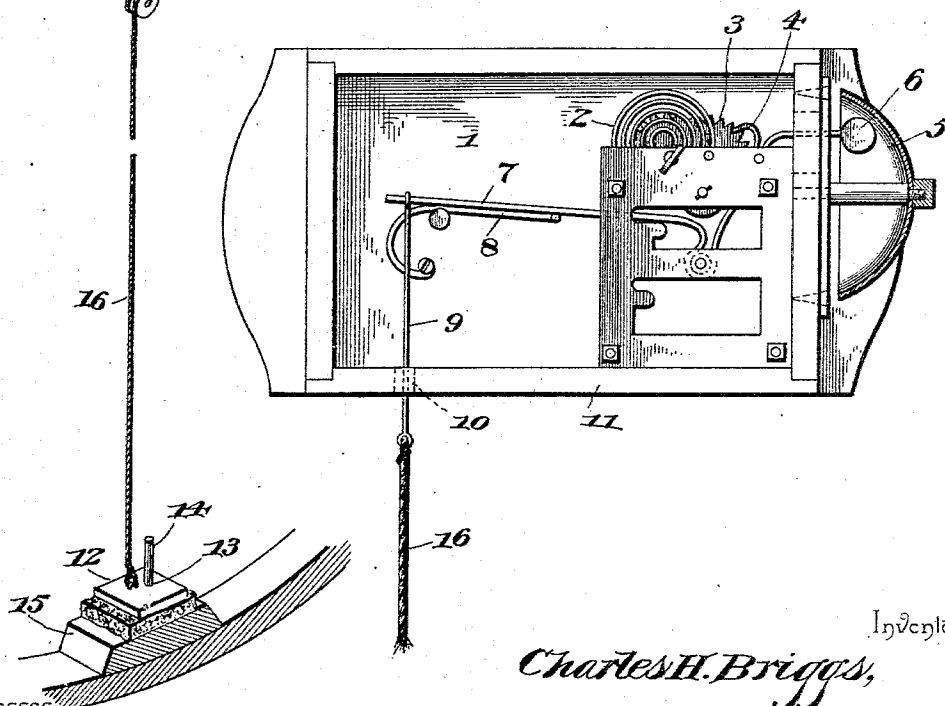


Fig. 2.



Inventor

Charles H. Briggs,

By *his* Attorneys.

C. H. Briggs.

Witnesses

G. S. Ober
G. E. Wolfe

UNITED STATES PATENT OFFICE.

CHARLES H. BRIGGS, OF JERSEY CITY, NEW JERSEY.

LEAK-ALARM.

SPECIFICATION forming part of Letters Patent No. 511,041, dated December 19, 1893.

Application filed June 3, 1893. Serial No. 476,428. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. BRIGGS, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Leak-Alarm for Vessels, of which the following is a specification.

My invention relates to improvements in alarms for use in connection with vessels, to indicate the existence of a leak or give notice when the water in the hold reaches a certain predetermined height.

The object of the invention is to provide a simple, inexpensive and effective device of the class named, in which the alarm, proper, can be arranged in the cabin, or in any other convenient position, remote from the hold, in order that there may be no failure in hearing the same.

Further objects and advantages of my invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings:—Figure 1 is a perspective showing an alarm mechanism, embodying my invention, arranged in the operative position. Fig. 2 is an enlarged view of the alarm proper.

Similar numerals of reference indicate corresponding parts in both the figures of the drawings.

1 designates the alarm, proper, which may be arranged in the cabin or pilot house of the boat or vessel, and consists, essentially, of an actuating spring, 2, an escapement wheel, 3, an escapement lever, 4, an alarm bell, 5, and a knocker, 6, carried by the escapement lever. Co-operating with these parts is a trip-lever, 7, of bell-crank shape, one arm of which is in operative relation to the escapement lever, whereby when the other arm is depressed the escapement lever is locked against vibration, and when said arm is released or elevated the escapement lever is free to be actuated by the spring, 2. A spring, 8, is employed to elevate the free arm of the bell-crank trip lever to release the escapement, and connected to said arm is a wire or rod, 9,

which extends through a guide opening, 10, in the lower side of the casing, 11, of the mechanism.

12, represents a weighted float, preferably of cork, which is designed to be arranged in the hold of the boat or vessel, and it is provided with a guide opening, 13, to receive a vertical guide stem, 14, fixed to a suitable base, 15, to rest upon the bottom of the hold. When the float is suspended, by means of the cord or flexible connection, 16, which is attached at its upper end to the exposed extremity of the connecting wire, 9, its weight is sufficient to hold the trip lever in engagement with the escapement lever and prevent the operation of the alarm, but when said float is elevated by the presence of water in the hold, or when said water rises sufficiently to elevate the float and relieve the trip lever of its weight, the alarm is sounded.

It will be understood that the flexible connection between the float and the trip lever enables the alarm mechanism, proper, to be arranged at any desired distance from the point of danger, by carrying said connection around suitable guiding pulleys, &c., such arrangement being so common in analogous relations as to need no illustration or detailed description, and therefore the alarm is sounded in a part of the vessel where it will reach the ear of the officer of the watch. The guide stem or pin holds the float in position and prevents displacement by the lurching of the vessel, and at the same time does not interfere with its easy rise and fall when effected by the water.

It will be understood that with a device arranged as described there is no necessity to open a hatchway to ascertain the state of the water in the hold. The float may be arranged at a given elevation, and as an alarm must be sounded as soon as the trip lever is relieved of the weight of the float, the apparatus needs no attention until warning is given.

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

In a leak alarm for vessels, the combina-

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tion with an alarm mechanism and a trip lever operatively connected thereto, of a fixed vertical guiding stem or pin, a float, provided with a guide opening fitting said stem or pin, and a flexible connection, as a cord, extending from the float to the trip lever and supporting the weight of the float, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES H. BRIGGS.

Witnesses:

LOUIS C. BRIGGS,

ERNEST I. SCOTT.