No. 688,607. Patented Dec. 10, 1901.

W. H. DIXON.

VESSEL SOUNDING ROD.

(Application filed Apr. 20, 1901.)

(No Model.)

Fig. 1.

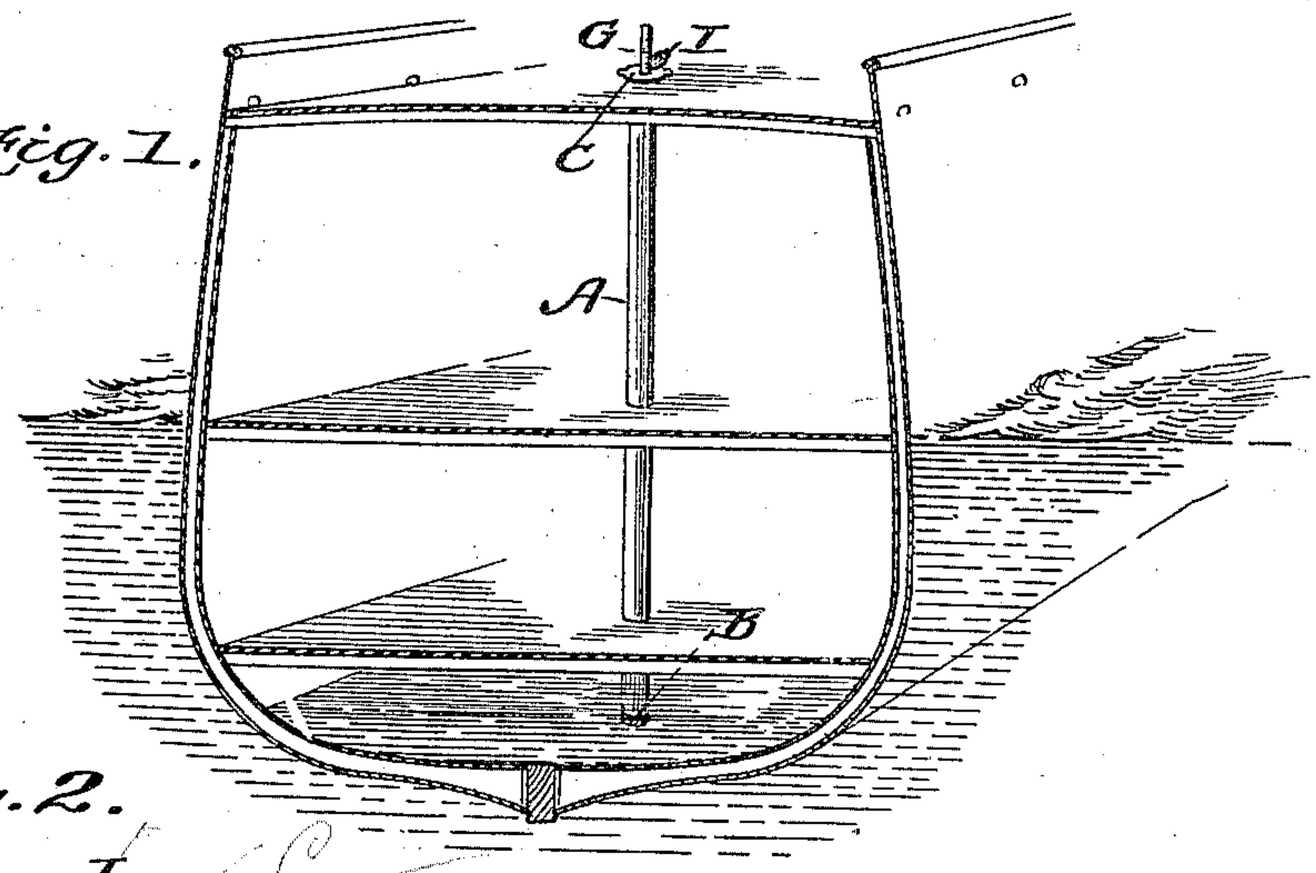


Fig. 2.

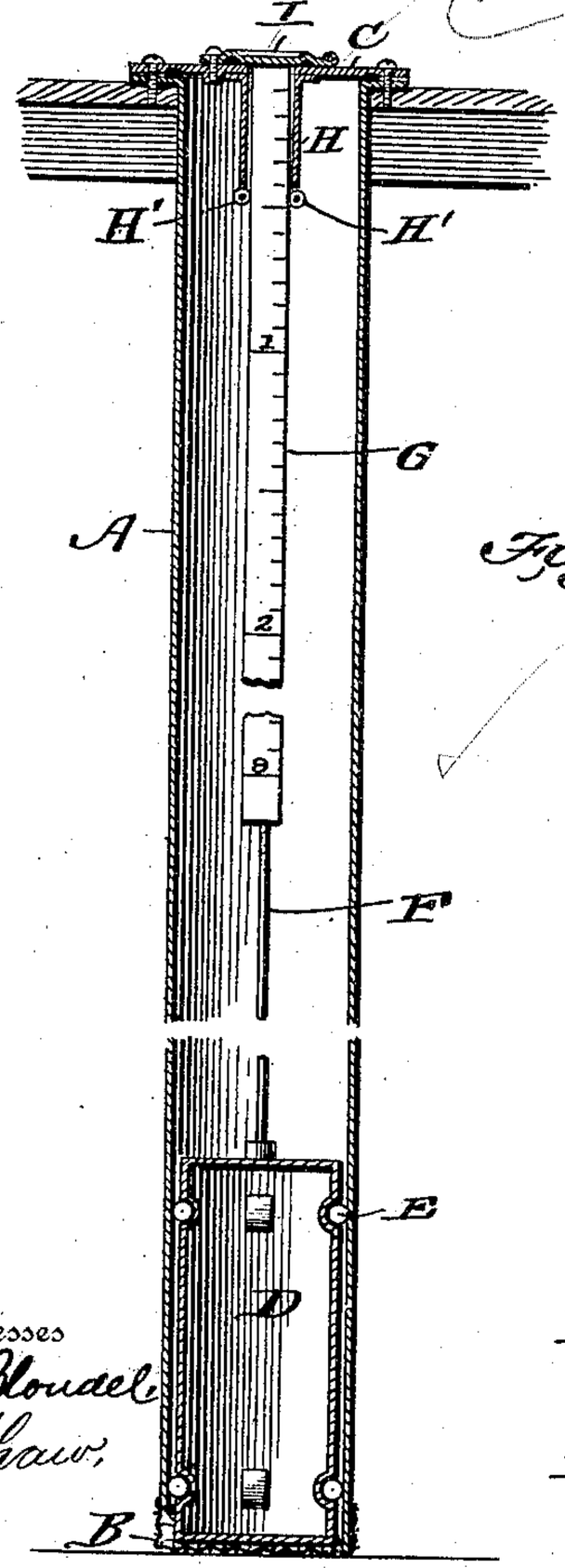


Fig. 3.

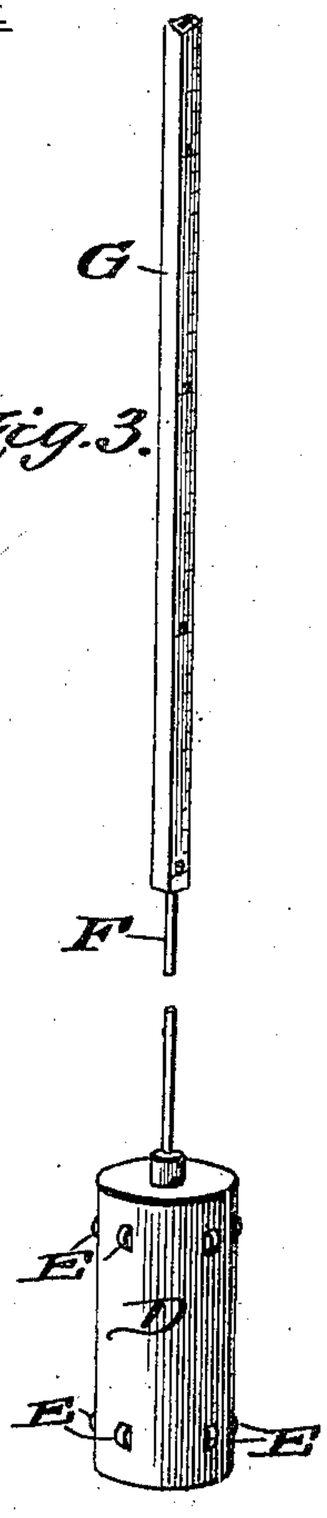


Fig. 4.

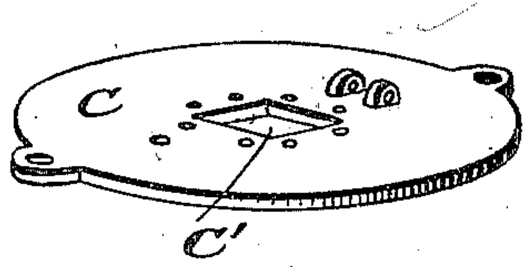


Fig. 5.

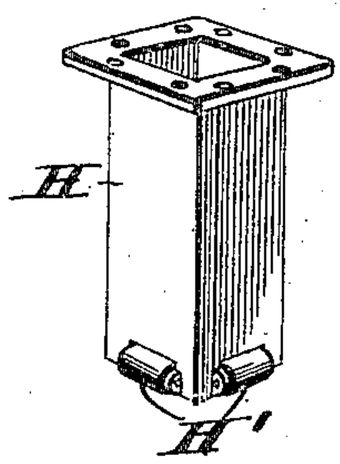
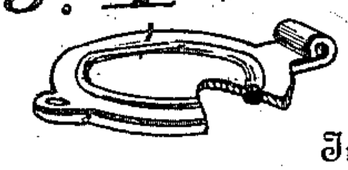


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM HENRY DIXON, OF CHICAGO, ILLINOIS.

VESSEL SOUNDING-ROD.

SPECIFICATION forming part of Letters Patent No. 688,607, dated December 10, 1901.

Application filed April 20, 1901. Serial No. 56,748. (No model.

To all whom it may concern:

Be it known that I, WILLIAM HENRY DIXON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Vessel Sounding-Rod, of which the following is a specification.

This invention is an improved construction of sounding-rod for vessels, the object of the invention being to provide a simple and inexpensive device by means of which the amount of water in the hold of a vessel can be quickly and easily ascertained.

With this object in view the invention consists, essentially, in providing a tube which extends from the deck of the vessel down to the bottom of the hold, said tube having a float movable vertically therein, said float having a rod projecting upwardly therefrom, said rod having a scale marked thereon, the upper end being adapted to project above the deck and indicating the depth of water in the vessel.

The invention consists also in certain details of construction by means of which the broad idea of my invention is carried out, all of said details being hereinafter fully set forth, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a view showing the practical application of my invention. Fig. 2 is a vertical sectional view of the device. Fig. 3 is a detail perspective view of the float and rod. Fig. 4 is a detail view of the cap-plate. Fig. 5 is a detail view of the guide-tube. Fig. 6 is a detail view of the cap.

In carrying out my invention I employ a tube A open at both ends, said tube being of such length as to extend from the deck proper to the extreme bottom portion of the hold of the vessel. The lower end has a suitable screen or strainer B to prevent dirt and foreign substances entering the tube A. The upper end of the tube passes through an opening cut in the deck and has a cap-plate C fastened to the upper end of the tube and also fastened to the deck by suitable screws, and a packing of any suitable material is arranged between the cap-plate and deck and tube in order to provide a tight joint, so that water will not pass into the tube while washing the deck. A float D, preferably made of metal, fits within the tube A, said float being made air-tight and normally resting in the bottom of the tube A. This float has bearing-rollers E arranged adjacent to the upper and lower ends, which rollers bear upon the interior of the tube A and guide the float as it moves up and down, it being understood that as water accumulates in the tube A the float will rise and will fall as the water descends, and the rollers E reduce the friction and render the movement of the float easier and steadier. These rollers may be arranged and attached in any suitable manner; but in practice I prefer to produce recesses or indentations at definite points and journal the rollers in such recesses or indentations, so that the float proper can be of such size as to fit snugly within the tube. A rod F is attached to the float, preferably at the bottom, and projects upwardly for a considerable distance, said rod having a scale or measurer G arranged thereon, said scale or measurer being preferably in the form of a rod or bolt, square in cross-section, the upper end working through a guide-tube H, which is fitted into the square opening C', produced centrally in the cap-plate C, the purpose of this guide-tube being to steady the upper end of the rod, and in order to reduce friction I journal the antifriction-rollers H' in the bottom of the guide-tube H. A cap I is pivoted to the cap-plate C and is adapted to cover the upper end of the guide-tube H, and this cap has a suitable packing-ring and is also provided with suitable fastening means, so that no water or other substance can escape into the tube from the top when the said cap is closed.

Whenever it is desired to ascertain the depth of water in the hold of the vessel, the cap I is unfastened and thrown back, and if there be any water in the vessel the float will immediately rise in the tube and project the graduated rod out through the tube H a distance equal to the rise of the float, which of course is equal to the depth of the water within the hold of the vessel. This permits the depth of water to be positively ascertained, thereby avoiding the laborious operation of sounding heretofore employed and saving a great amount of time.

The details of construction herein shown and described are those which I have found

convenient for carrying out my invention; but it will of course be understood that they may be changed or varied as circumstances may require without departing from the broad idea of my invention.

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

1. In a device for the purpose set forth, the combination with the tube having a float arranged therein, an indicating and measuring rod attached to the float, the cap-plate and guide-tube arranged at the upper end of the tube, and the cap adapted to cover the end of the guide-tube, substantially as shown and described.

2. In a device for the purpose set forth, the combination with the tube having a screen or strainer at the bottom thereof, of a float arranged within the tube and having rollers arranged thereon adjacent to the upper and lower ends of the float, the upwardly-projecting rod having a scale or indicating-marks thereon, the cap-plate arranged upon the top of the tube, the guide-tube attached to the cap-plate and having antifriction-rollers at its lower end, and the cap attached to the cap-plate and adapted to cover the central opening and the upper end of the guide-tube, substantially as set forth.

WILLIAM HENRY DIXON.

Witnesses:
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