

2 Sheets—Sheet 1.

R. E. WALSH.

Patented Nov. 10, 1885.

Fig. 1.

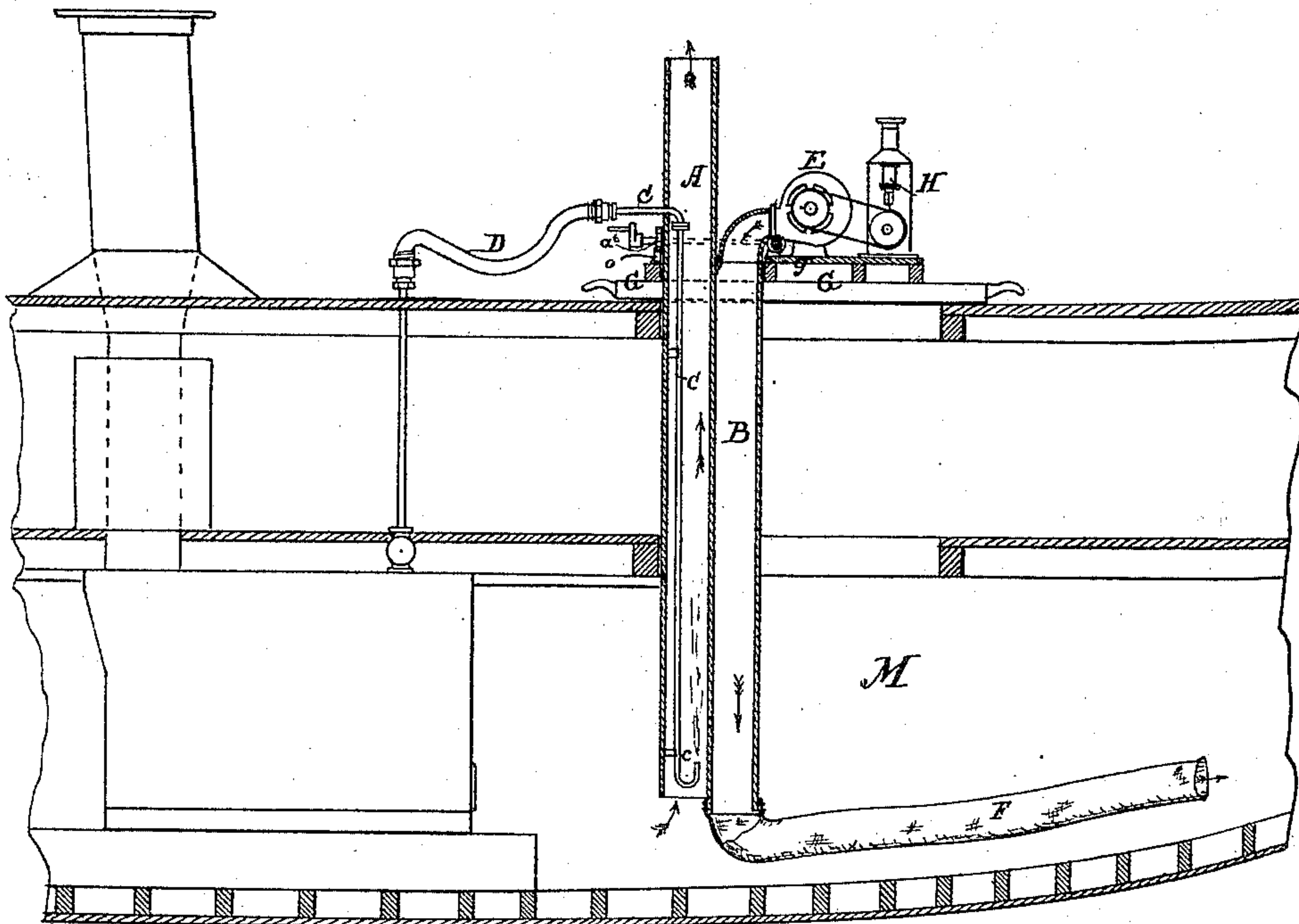
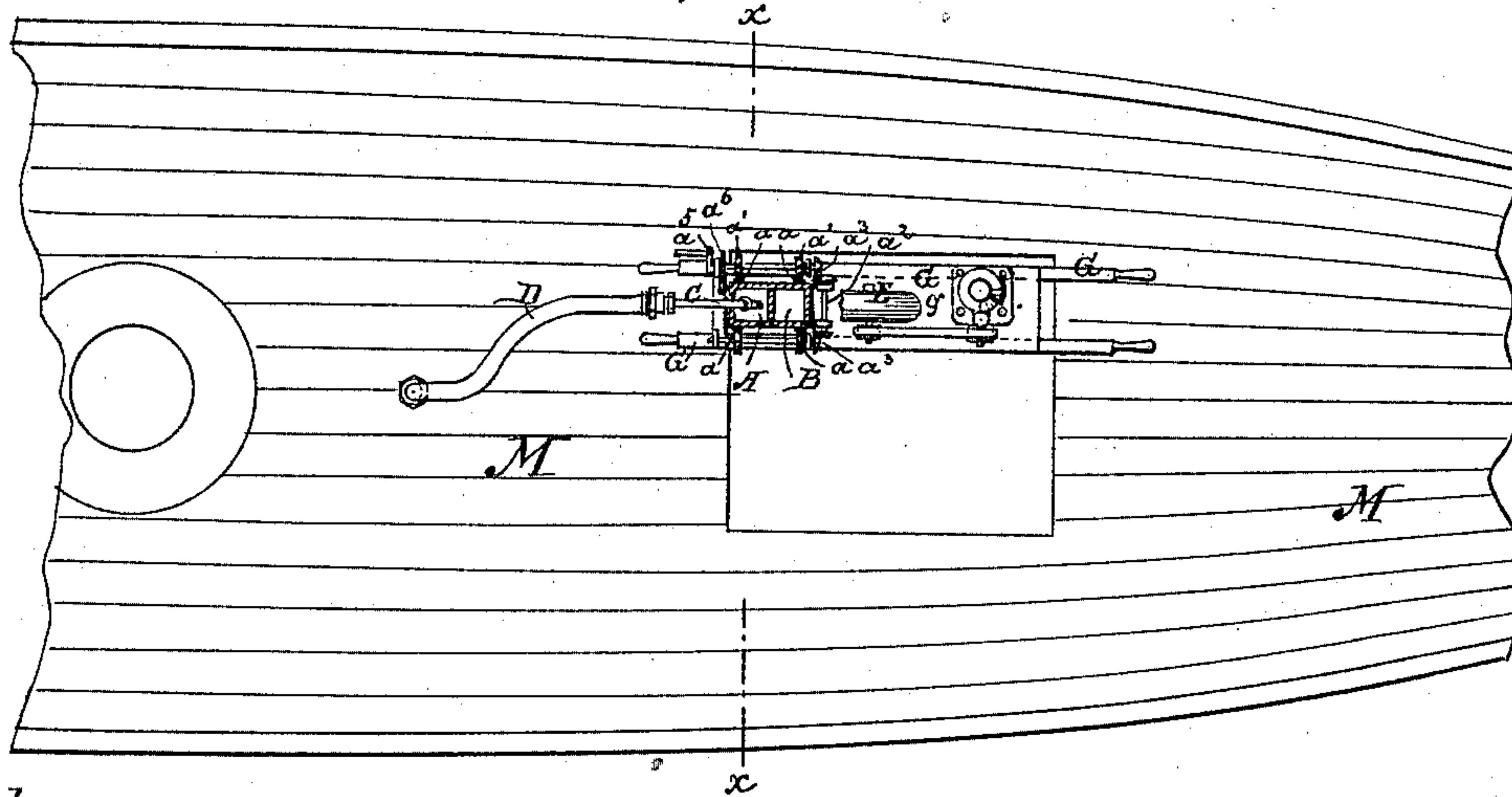


Fig. 2.



Inventor.

Robert E. Walsh
by Charles Raettig
his Attorney.

(No Model.)

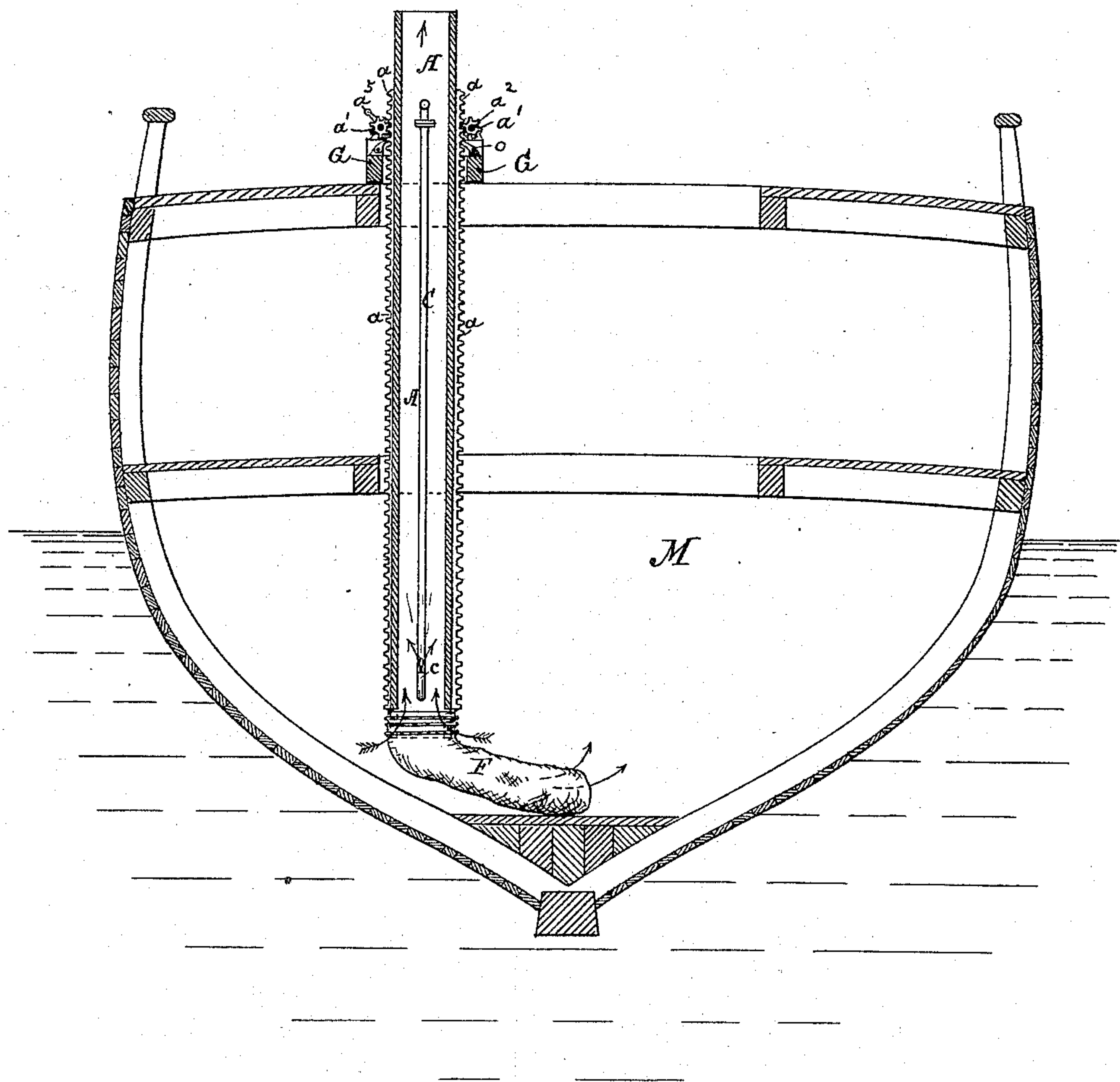
2 Sheets—Sheet 2.

R. E. WALSH.
PORTABLE VENTILATING APPARATUS.

No. 330,177.

Patented Nov. 10, 1885.

Fig. 3.



Witnesses.

Alfred Vivarttas

Chas Broughton

Inventor.

Robert E. Walsh

by Charles Rastig
his Attorney

UNITED STATES PATENT OFFICE.

ROBERT E. WALSH, OF NEW YORK, N. Y.

PORTABLE VENTILATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 330,177, dated November 10, 1885.

Application filed August 21, 1885. Serial No. 174,955. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. WALSH, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improved Portable Ventilating Apparatus, of which the following is a specification.

My invention relates to those contrivances by means of which vessels, stores, or other closed apartments are temporarily ventilated when required; and the object of my invention is to provide a portable ventilating apparatus which will act effectively and quickly, yet be easily transferred from one hatch or location to another. I attain this object by the apparatus illustrated in the accompanying drawings, of which—

Figure 1 is a longitudinal sectional view of a part of a vessel with my apparatus in position. Fig. 2 is a plan view of the same. Fig. 3 is a cross-section taken on line *xx* of Fig. 2.

The same letters refer to the same parts.

The leading features of my invention are two flues or boxes, A and B, forming a double pipe. Within the box A is secured a pipe, C, which is reflexed upon itself and left open at the lower end at *c*. To the upper end of the pipe C is secured the coupling of a flexible pipe or hose, D, which connects with a steam-boiler, as shown in Fig. 1, or any blower capable of creating a pressure in C and a current, as shown by the arrows in A. The box B is connected to a pressure-blower, E, and supplied with the flexible hose F, by means of which the air supplied by the blower E may be carried to any particular part of the room or hold desired. To the outside of the pipes A and B are secured racks, *a*, by means of which, in connection with the pinions *a'*, shafts *a''*, gear *a'''*, and crank or pulley *a''''*, the boxes A and B may be lifted or lowered at will. The shafts *a''* are supplied with ratchets *a''''* and pawls *o*, by means of which the boxes may be retained at any desired level.

The boxes A and B are carried in a portable frame, G, in which they are free to slide up and down, and to which are secured the journal-boxes of the shafts *a''* and the pawls *o*. Upon this frame G is a platform, *g*, upon which is placed the blower E and an engine, H, for driving the same; or, if preferred, the engine H may be located upon the dock and the power be transmitted to the blower by means of a belt.

When unloading a vessel, the frame G is placed in position with the boxes A and B raised up. As the cargo is gradually removed the boxes A and B are lowered, thus supplying the ventilation at the point where it is most needed—the surface of the cargo—and thereby in cases of gas or guano relieving the workmen from the dust or effluvia.

In loading a vessel, the converse of operation obtains, and the boxes A and B are gradually raised as the hold is filled.

For convenience in receiving or discharging cargo the frame G is made to cover but a portion of the hatch of the vessel M, as shown in Fig. 2.

Having thus described the nature and uses of my invention, I claim—

In a portable ventilating apparatus, the combination of the box A and the box B, having the racks *a* upon their sides, with the frame G, carrying the pinions *a'*, shaft *a''*, ratchet *a''''*, and pawl *o*, whereby the boxes A and B and their connections may be raised or lowered at will, substantially as herein shown and described.

Signed at New York city, in the county of New York and State of New York, this 19th day of August, A. D. 1885.

ROBERT E. WALSH.

Witnesses:

H. E. PERRIN,
H. F. BURKE.