

E. E. MANN.

FOG-SIGNAL.

No. 175,866.

Patented April 11, 1876.

Fig. 1.

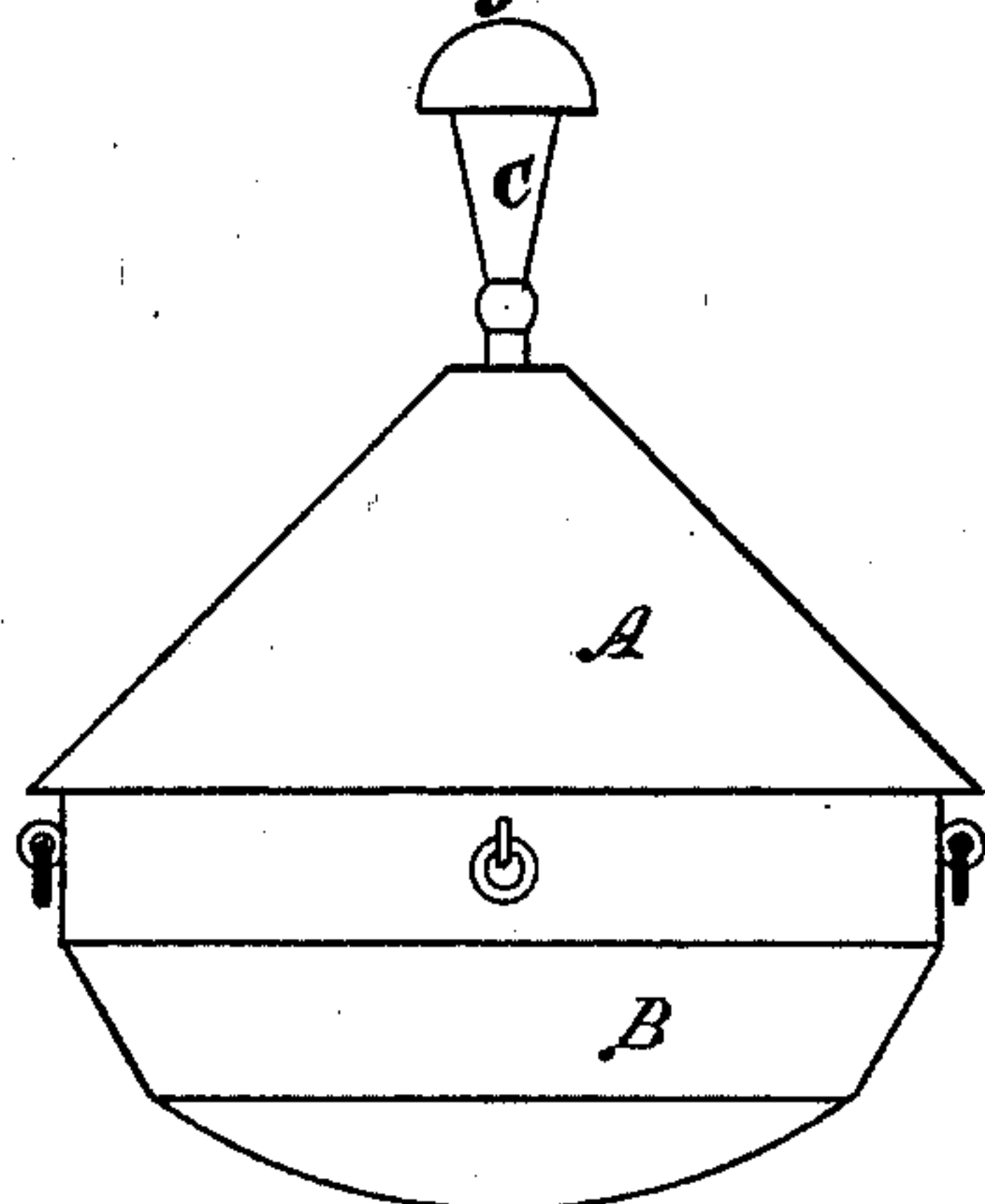


Fig. 2.

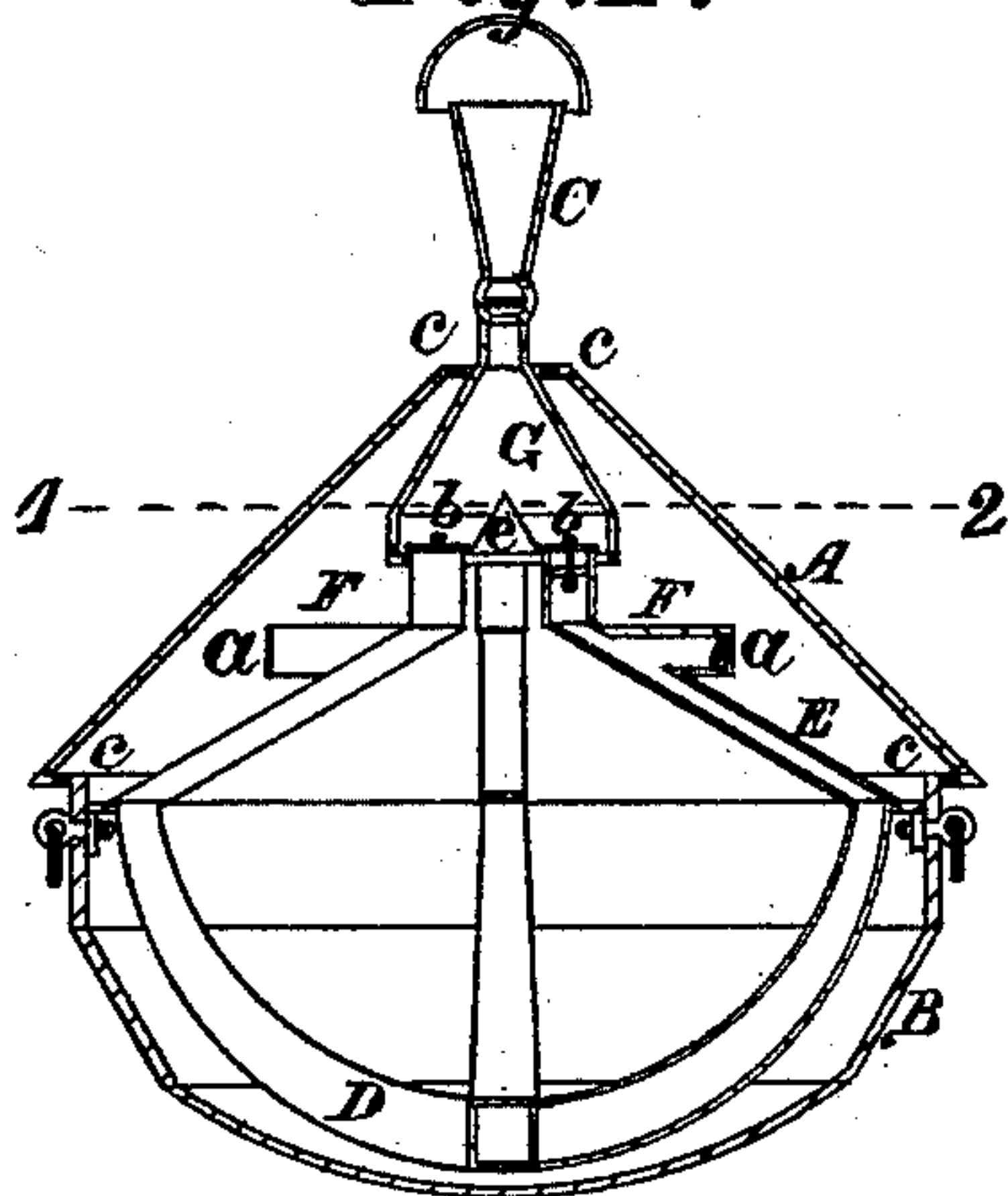
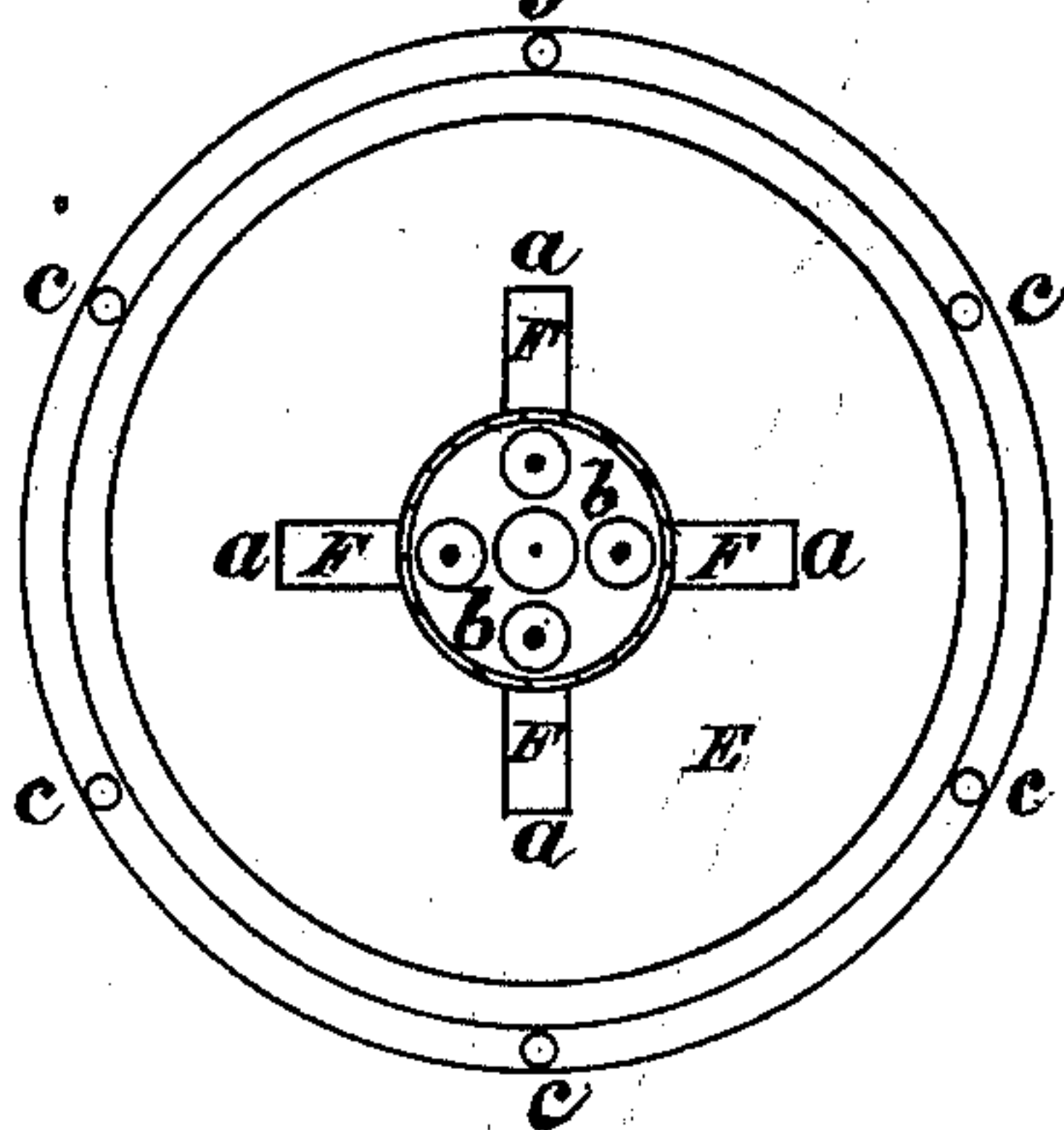


Fig. 3.



Witnesses;

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UNITED STATES PATENT OFFICE

EDGAR E. MANN, OF LAWRENCE, MASSACHUSETTS, ASSIGNOR OF PART OF
HIS RIGHT TO ZENAS FOLGER AND JAMES M. HORNE, OF SAME PLACE.

IMPROVEMENT IN FOG-SIGNALS.

Specification forming part of Letters Patent No. **175,866**, dated April 11, 1876; application filed
December 4, 1875.

To all whom it may concern :

Be it known that I, EDGAR EBENEZER MANN, of Lawrence, in the county of Essex and Commonwealth of Massachusetts, have invented an Improved Fog-Signal or Soffluer, of which the following is a specification :

The object of my said invention is to furnish for the dangerous parts of the sea-coast, and for the marine service generally, a fog-alarm or soffluer which shall be automatic in its operations, and which shall produce a sufficient sound to be heard a distance that will give warning of the dangerous surroundings. All of which will be more fully seen by reference to the accompanying drawings, in which like letters represent the same parts in each of the figures, of which—

Figure 1 is an outside view, showing my invention as complete for service; Fig. 2, a sectional and interior view, showing the working mechanism and its arrangement, and Fig. 3 a top and sectional view taken at 1 and 2, and showing the valve-seats and other mechanism, of which—

A is a casement, designed to cover the upper part of the signal and protect the same from the sea and weather; B, a casement inclosing the pipes and valves, being water and air tight, and designed to buoy up the apparatus and serve as an outer casement; C, a signal-horn; D, curved pipes within the casement, designed to contain water or other liquid, which, by its motion within the tube, compresses the air therein contained, and expels it through the valves *b b* into the chamber G; E, an air-chamber formed by the casement A, and designed to receive air from without; F F, valve-seats, designed to hold the valves *a a a a*; G, an air-chamber, designed

to receive the compressed air from the tubes D; *a a a a*, valves through which it is designed to supply air to the tubes D to replace that expelled through the horn; *b b*, valves through which air is expelled from the tube D; *c c c c*, openings through which air is received to the chamber E, and *e a* cone about which are arranged the valves *b b*.

My invention is operated by the action of the sea, (being anchored at or near dangerous points of the coast,) its motion causing the signal to roll or vibrate, causing the liquid in D to pass in one or the other of the tubes, compressing the air therein, forcing the same through one of the valves *b b*, and at the same time drawing in air (to supply that thus expelled) through one of the valves *a a a a*. As the apparatus vibrates back the operation is repeated.

I have been informed that it is not new to confine liquid in a tube for the purpose of compressing air and expelling it through a horn as a signal, and I make no claim thereto. But I am not aware that previous to my said invention it has been used under circumstances as above.

Having thus described my said invention and its mode of operation, I claim as new and desire to secure by Letters Patent—

In a fog-signal, as herein described, the combination of the casements A and B, the tubes D, the valves *a a a a*, the valves *b b*, and the chambers E and G, each with each, in a manner substantially as and for the purpose herein described and set forth.

EDGAR EBENEZER MANN.

Witnesses:

CHAS. D. MOORE,
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