

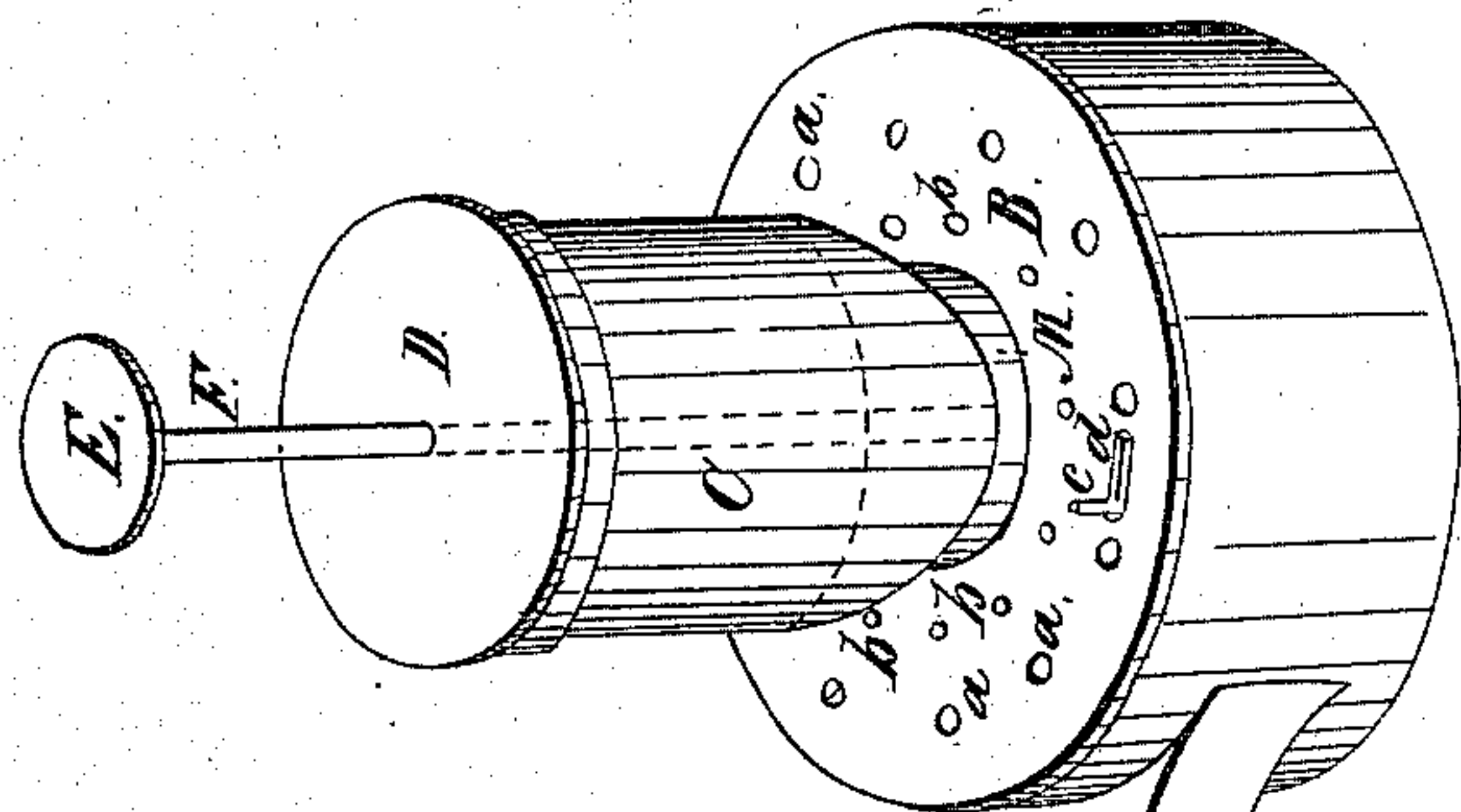
*C. B. Porter,*

*Inhaler.*

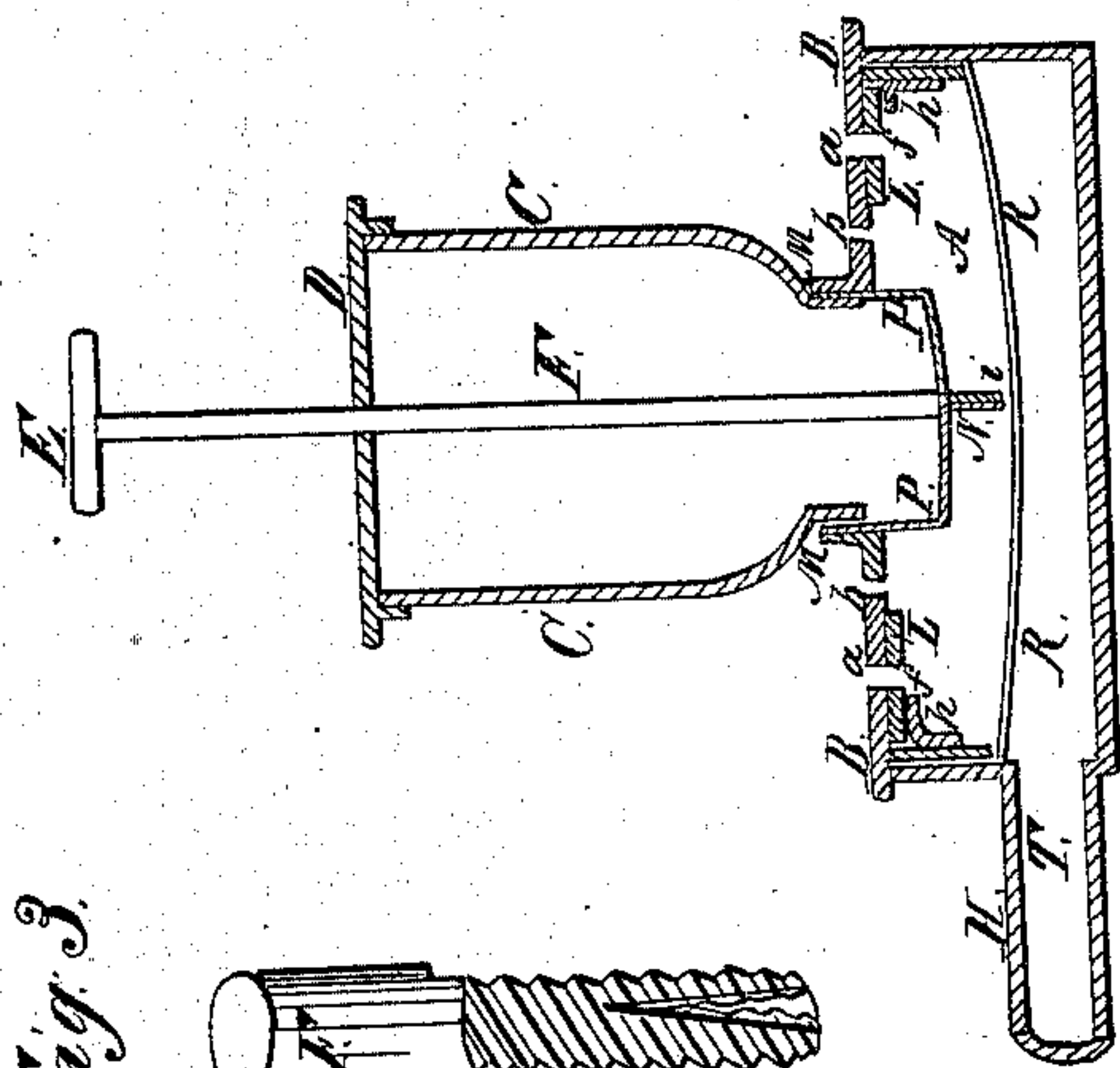
*N<sup>o</sup> 35,257.*

*Patented May 13, 1862.*

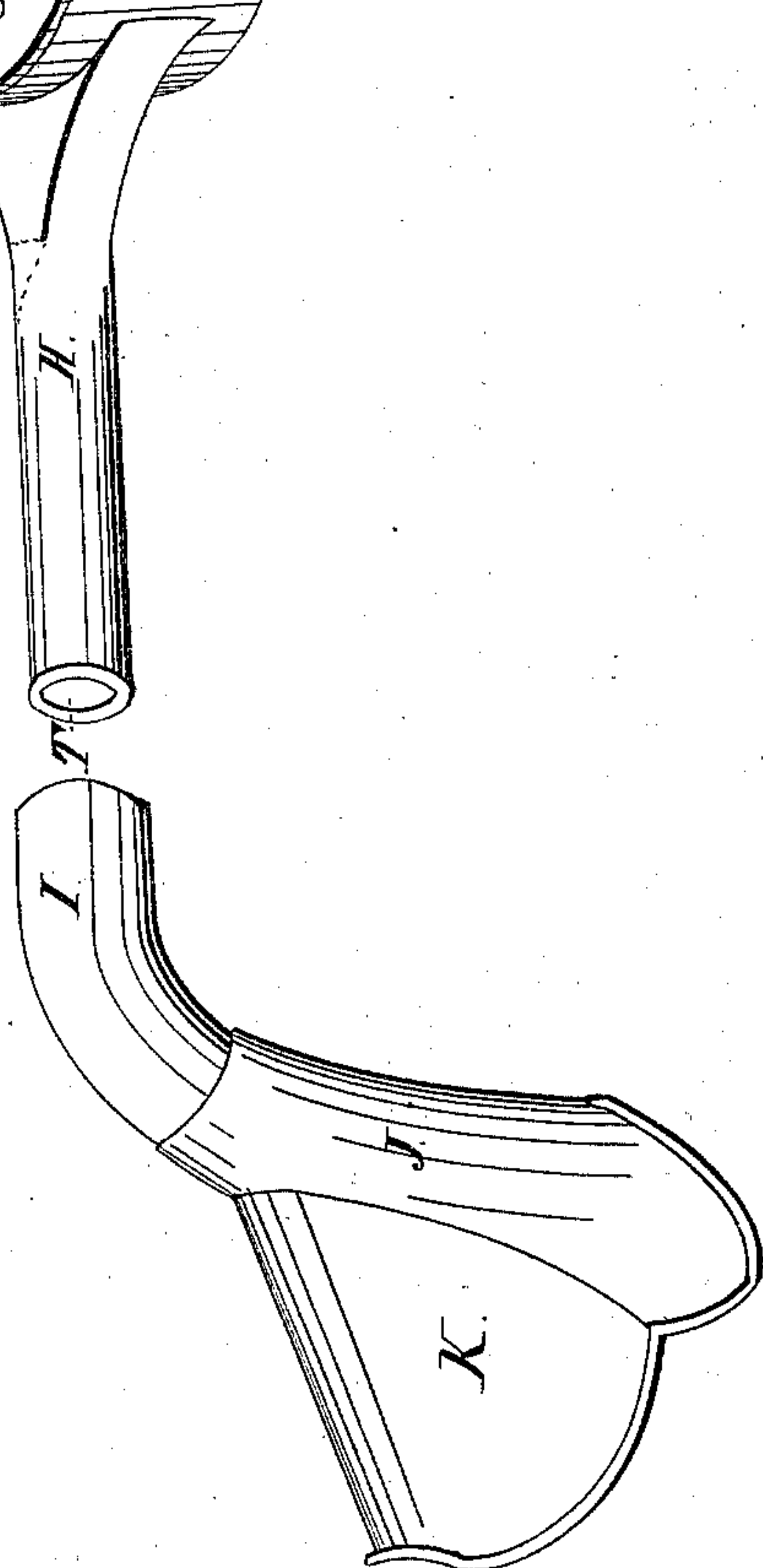
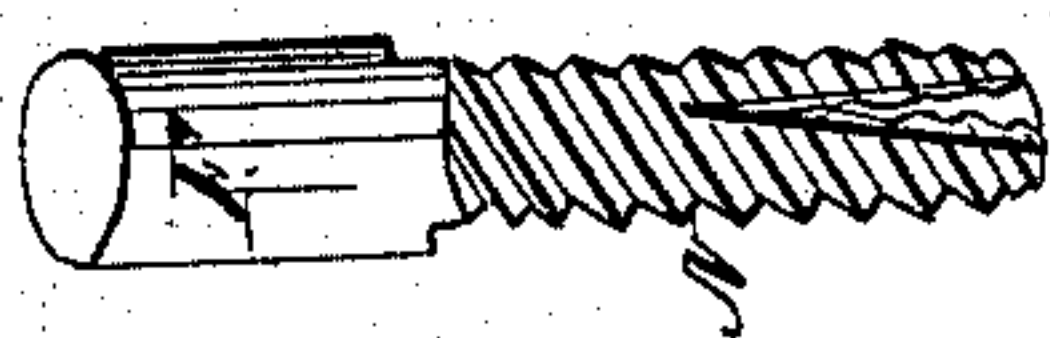
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

*Ed. P. Pottin*

*H. Fritz*

*Inventor:*

*Charles B. Porter*



# UNITED STATES PATENT OFFICE.

CHARLES B. PORTER, OF ANN ARBOR, MICHIGAN.

## IMPROVEMENT IN APPARATUS FOR INHALING CHLOROFORM.

Specification forming part of Letters Patent No. 35,257, dated May 13, 1862.

### *To all whom it may concern:*

Be it known that I, CHARLES B. PORTER, of the city of Ann Arbor, in the county of Washtenaw and State of Michigan, have invented a new and Improved Chloroform-Inhaler, for administering chloroform, ether, and other anæsthetic, volatile, or vaporized agents with greater safety and less waste from evaporation than by any other mode; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the combination of a reservoir, air-chamber, air-regulator, screen, valve, tube, and mouth-piece in such a manner that the agent to be administered, after being placed in the reservoir, may pass through the bottom by means of a valve in greater or less quantities at the will of the operator. After passing through the valve it falls in drops upon a screen stretched across the center of a chamber, into the top of which the bottom of the reservoir is closely fitted, and there coming in contact with the air, admitted in sufficient quantity by means of the air-regulator, becomes vaporized, and the vapor passes through a tube attached to the side of the air-chamber, near the bottom, to the mouth-piece placed upon the mouth and nose together, or either separate, of the patient, whence it is inhaled by him, and by thus confining the vapor preventing the rapid evaporation and escape of a large quantity, and also allowing the surgeon to administer a greater or less quantity, as the state of the patient will admit.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I make a reservoir of glass or other suitable substance, substantially the shape and size represented by C in Figures 1 and 2 of the accompanying diagram. Upon the top of this reservoir is fitted a cap, (of brass or other metal,) D, with a small hole in the top. Said cap is intended to be nearly air-tight when in place. To the bottom of the reservoir is firmly attached with cement a brass bottom, P P, in Fig. 2, through the center of which a hole with a thread is cut to admit of the passage of the screw N in Figs. 2 and 3. I then make a rod, F, with a head, E, of sufficient length, which passes through the cap and into the hole at the bottom of the reservoir. The lower end of this rod, of which Fig. 3 is a sec-

tional and enlarged view, has cut upon it a thread, *n*, fitting in the hole in the bottom of the reservoir. On one side of screw is cut longitudinally a taper slot, *i*, Fig. 3, through which, by raising or lowering the rod, the flow of chloroform or other agent is made greater or less, or shut off altogether. I next make an air-chamber, A, Fig. 1, to one side of which, near the bottom, is attached the tube H leading to the mouth-piece. The cover of this chamber consists of two parts—the cover proper, B, and a ring on the under side, partly shown by L L, Fig. 2. In the center of this cover is a raised orifice, M, in which is fitted tightly the bottom P P of the reservoir C. Through the cover, near the orifice M, are cut small holes *b b b*, for the admission of air, which are always open. Outside of these a row of larger holes, *a a a*, is cut, which can be closed. To the under surface of the cover is fitted a ring, L L, held in place by the supports *h h*, Fig. 2. Through this ring holes *f f* are cut corresponding with the holes *a a*. This ring is turned by the pin *c* moving along the guide *d* on the outer surface of the cover, thus opening or closing the large holes *a a*. When chloroform is used, the air-holes are all left open; when ether, the large ones are closed; and when other agents, at the discretion or will of the operator. Across the bottom of this cover is stretched a piece of muslin or other cloth, R R, Fig. 2, for a screen, upon which the agent drops from the slot *i*, where, coming in contact with the air admitted through the holes in the cover, it becomes immediately vaporized and passes through the tube T. At the end of the tube is fitted the neck I (to which is attached the mouth-piece J and K) in such a manner that it may be turned in any direction to suit the position of the patient. The agent is then placed in the reservoir C, the instrument put together, the mouth-piece adjusted, and the flow regulated by the screw N, substantially as described.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of the reservoir, air-chamber, air-regulator, screen, valve, tube, and mouth-piece, substantially as hereinbefore described, and for the purpose specified.

CHARLES B. PORTER.

Witnesses:

ED. P. PITKIN,

F. FRITZ.