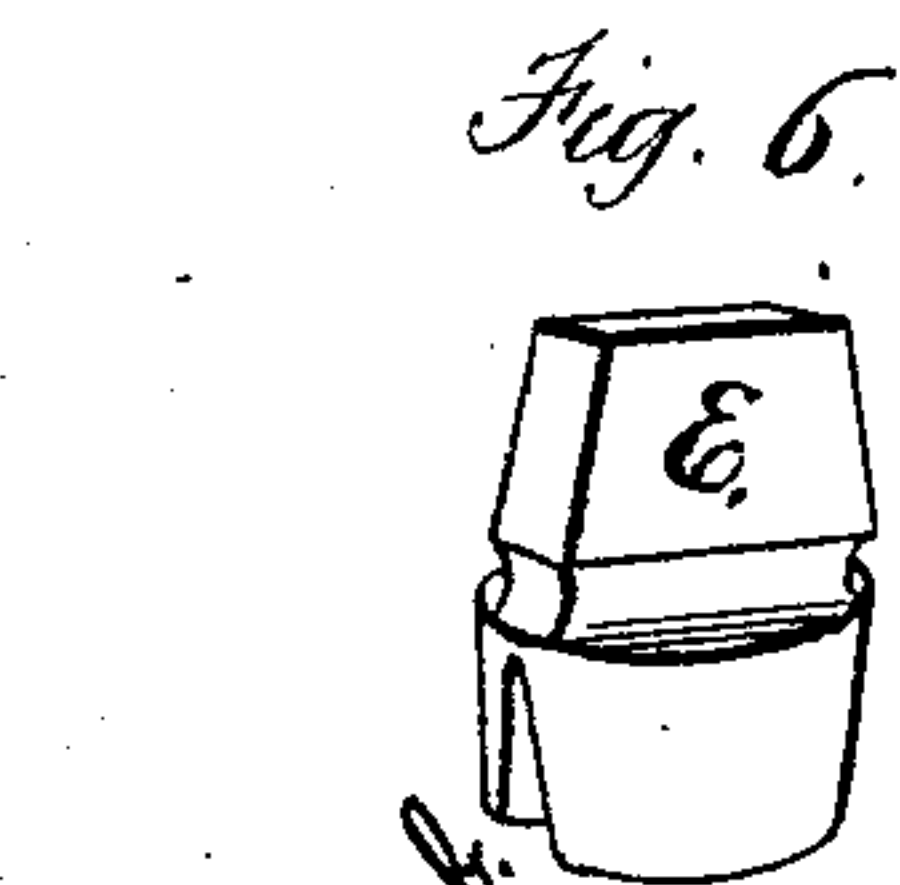
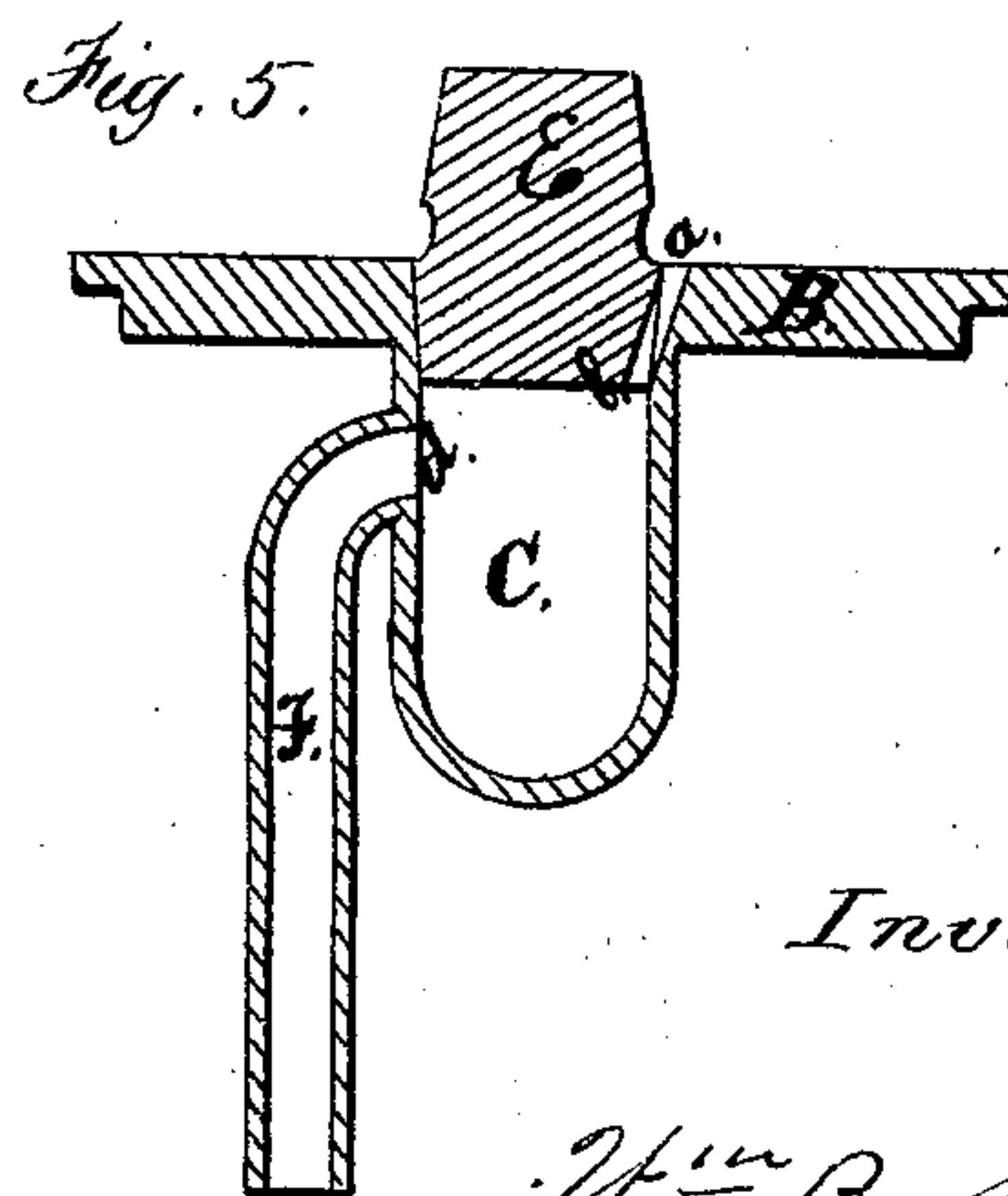
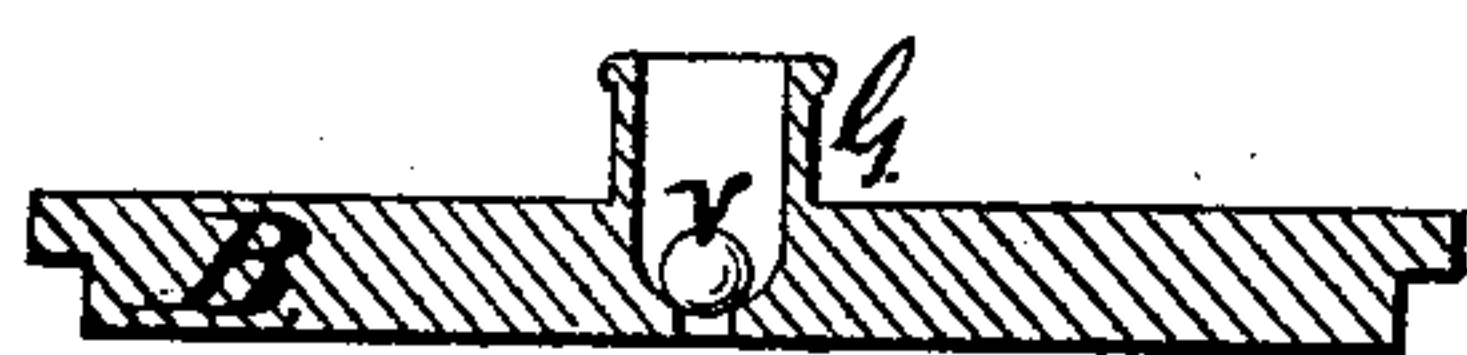
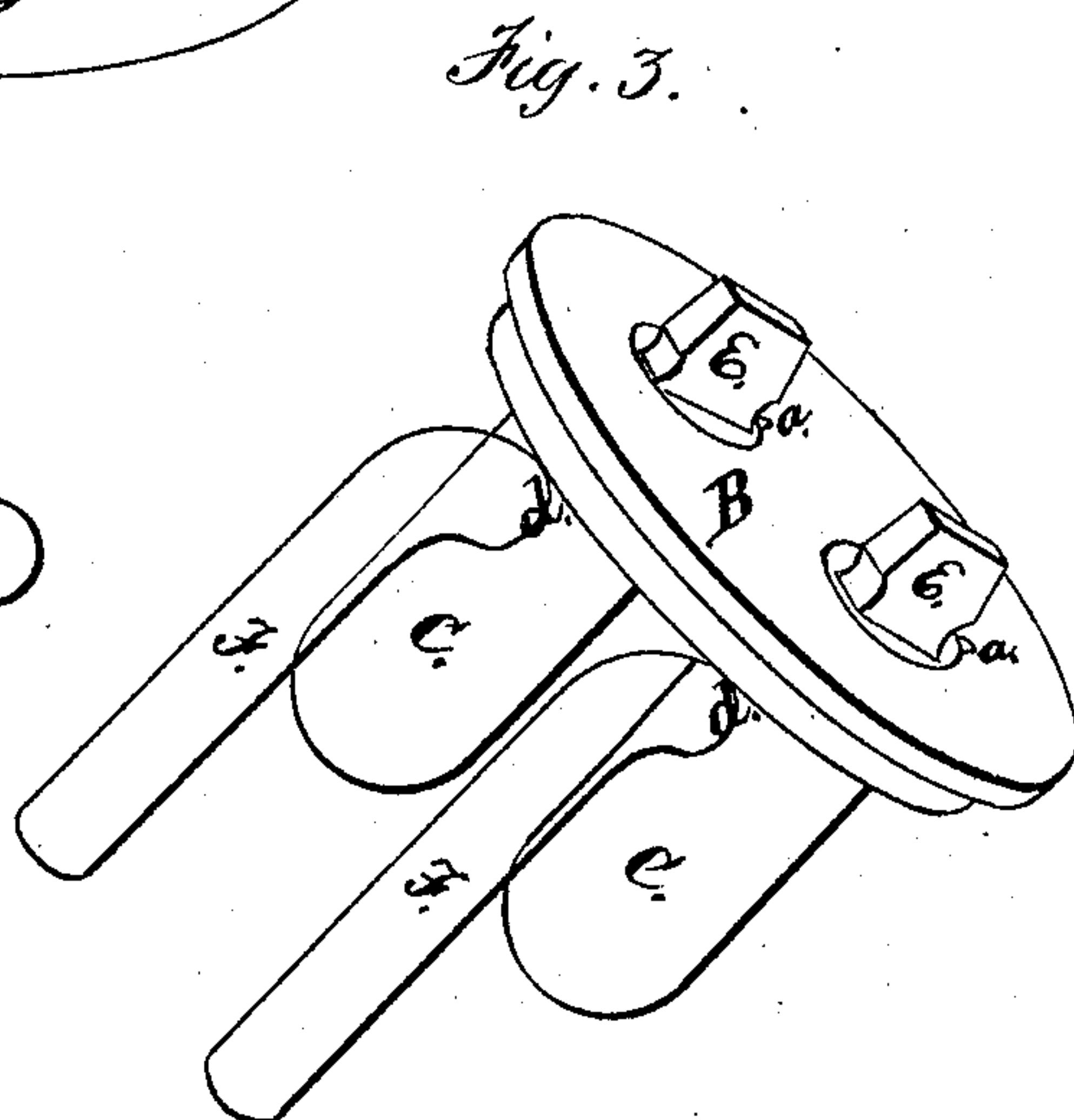
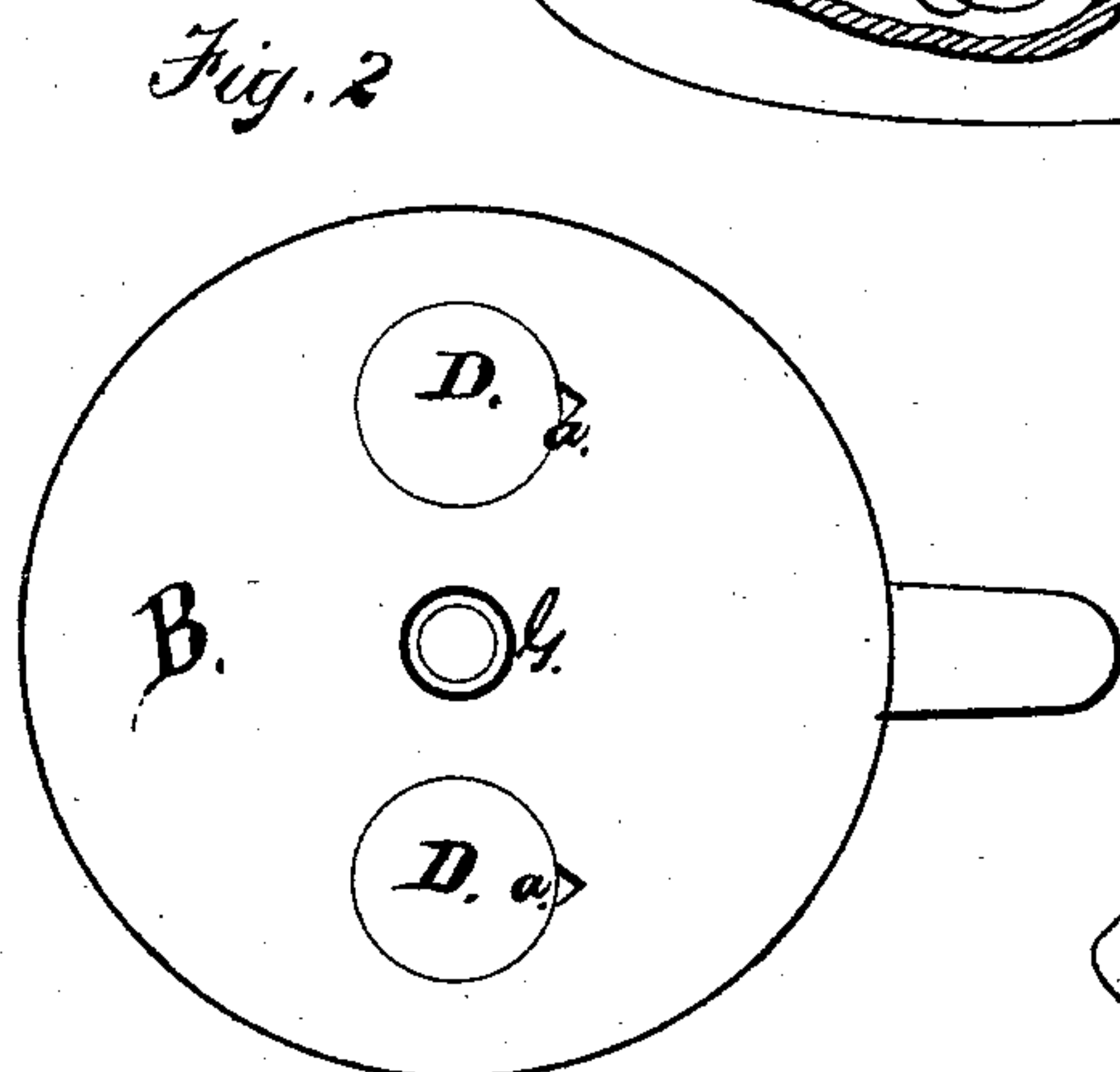
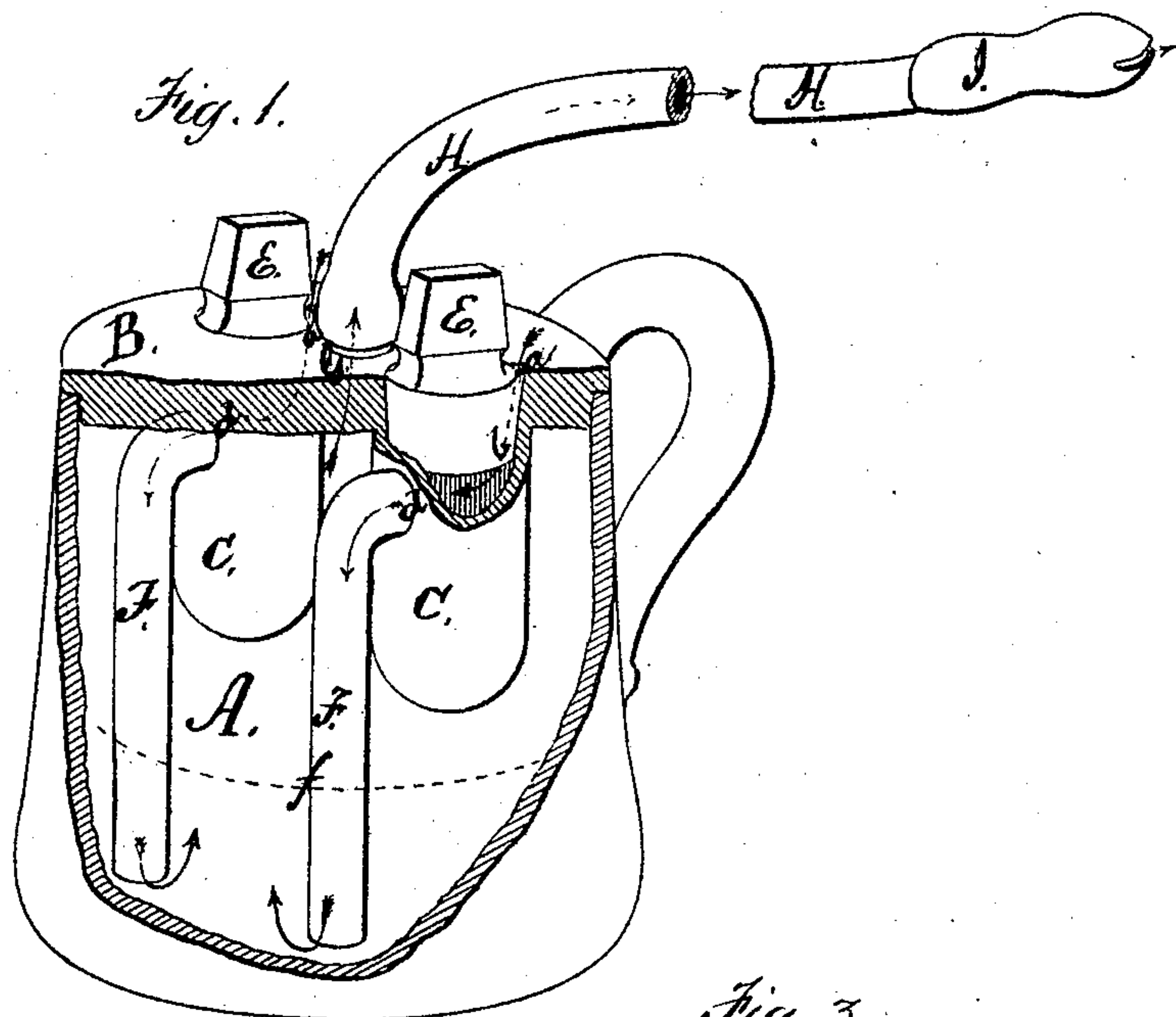


W. B. HIDDEN.

Inhalers.

No. 146,905.

Patented Jan. 27, 1874.



Witnesses.
C. F. Brown
M. Schuch.

Inventor.

W. B. Hidden

UNITED STATES PATENT OFFICE.

WILLIAM B. HIDDEN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN INHALERS.

Specification forming part of Letters Patent No. **146,905**, dated January 27, 1874; application filed January 16, 1874.

To all whom it may concern:

Be it known that I, WILLIAM B. HIDDEN, of the city and county of Baltimore and State of Maryland, have invented a new and improved apparatus for the inhalation of medicinal preparations for the treatment of diseases of the respiratory organs; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a perspective view of the entire completed apparatus with a portion broken away, which, being assumed to be made of glass, shows, at the same time, the internal structure or arrangement. Fig. 2 is a top view, (the breathing-tube being omitted,) and designed more particularly to show the slots in the opening or neck of the sunken chambers or reservoirs. Fig. 3 is an oblique view of the cover with its attachments, the nipple for the attachment of the breathing-tube being omitted for the purpose of showing better the slots above referred to. Fig. 4 is a sectional view of the top through the nipple, for showing the location of the valve therein. Fig. 5 is a sectional view of the top through one of the internal sunken chambers or reservoirs, with its stopple and its connected tube at the point of the combination-slot, to show specially the mode of producing the opening when the stopple is turned into position for use; and Fig. 6 is a view of the stopple with slot in its lower part.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention consists in providing a compact, portable, convenient, and inexpensive apparatus, whereby the vapor or gas of, or air affected by contact with, any desired number of medicinal preparations may be inhaled, while that of the others used may be inhaled or excluded at pleasure, the whole being arranged and combined as follows.

To enable others skilled in the art to make and use my invention, I thus describe its construction and operation:

Take a mug, A, (glass preferred,) and have it ground or otherwise prepared internally at the top, so as to receive a cover, B, which must also be ground or otherwise prepared, so as to

fit the mug perfectly close. This cover is provided with any required number of reservoirs or chambers, C C, made in connection with it, and entirely upon its under side, and opening externally only through it, which openings D D are carefully prepared, so as to admit of a ground-glass or other absolutely close-fitting stopple, E E. In the upper half of each of these openings, at a uniform point, is a slot, *a*, and a corresponding slot, *b*, in the lower half of each stopple, so that when the stopple is so turned that the two slots unite a free and unobstructed passage is produced for air into the sunken or internal reservoir, and, when not so united, a perfectly-closed reservoir. Beneath the cover, and as near to it as practicable, and upon the side opposite the slot, is an opening, *d*, into each of these sunken or internal reservoirs or chambers, and to this opening is fixed a tube, F, bent, and extending downward near to the bottom of the mug. On the outside of the cover, at a convenient point, is a bulb or nipple, G, with an opening through it and the cover into the mug for the passage of air which has been medicated in the reservoirs and the mug. To this is attached an ordinary rubber tube, H H, of convenient length, with suitable mouth-piece I. At the top of the bulb or nipple, or at the bottom of the tube, is a valve, V, so constructed and placed as to permit the egress of air from the top of the mug through the nipple and tube, and to prevent the air entering the mug, by blowing or otherwise, through this opening.

The apparatus is used by removing the cover and putting into the mug A the medicinal preparation or leading ingredient with which it is desired to affect or medicate the air for inhalation in sufficient quantity to come to a line, *f*, above the bottom or lower end of the tubes F F. The cover may then be replaced in position. Before or after the replacing of the cover, a suitable quantity of the other specifics with which it is designed to affect or modify the medication of the air, which is effected in the mug, is placed in the several chambers or reservoirs C. The stopple E of such reservoir or reservoirs as it is desired at the time to use is so turned that the slot *b* on the stopple combines with the slot *a* in the cover B to produce a free passage for the ex-

ternal air into the chamber or reservoir C. If it is not desired at the time to use the contents of any one or more of the reservoirs, the slots of the reservoir or reservoirs to be omitted are not brought in contact with the slot of the cover, and no air can then pass into or through the chamber or reservoir thus closed to affect the result. The patient then inhales through the mouth-piece I, and the external air rushes in through the passage *a b* into the chamber C, passes over and is modified by the contents of that chamber, or its vapor, passes on through the opening *d* and the tube F, through the medical preparation in the mug, and out through the opening G and the tube H to the patient.

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

1. In a medical inhaler, the cover B, having tubed chambers connected with it on the under side, all in one piece, as set forth.

2. The construction of the stopples to the chambers with slots *a* in their lower half, to connect with corresponding slots *b* in the upper half of the opening to the internal chambers, so as to permit or prevent the passage of air into and through said chambers or reservoirs C C, or either of them, at will.

3. In combination with the cover B, the nipple adapted to receive the rubber tube, and provided with a globular valve, resting in a hollow in the nipple, as set forth.

WM. B. HIDDEN.

Witnesses:

C. F. BROWN,

N. K. ELLSWORTH.