

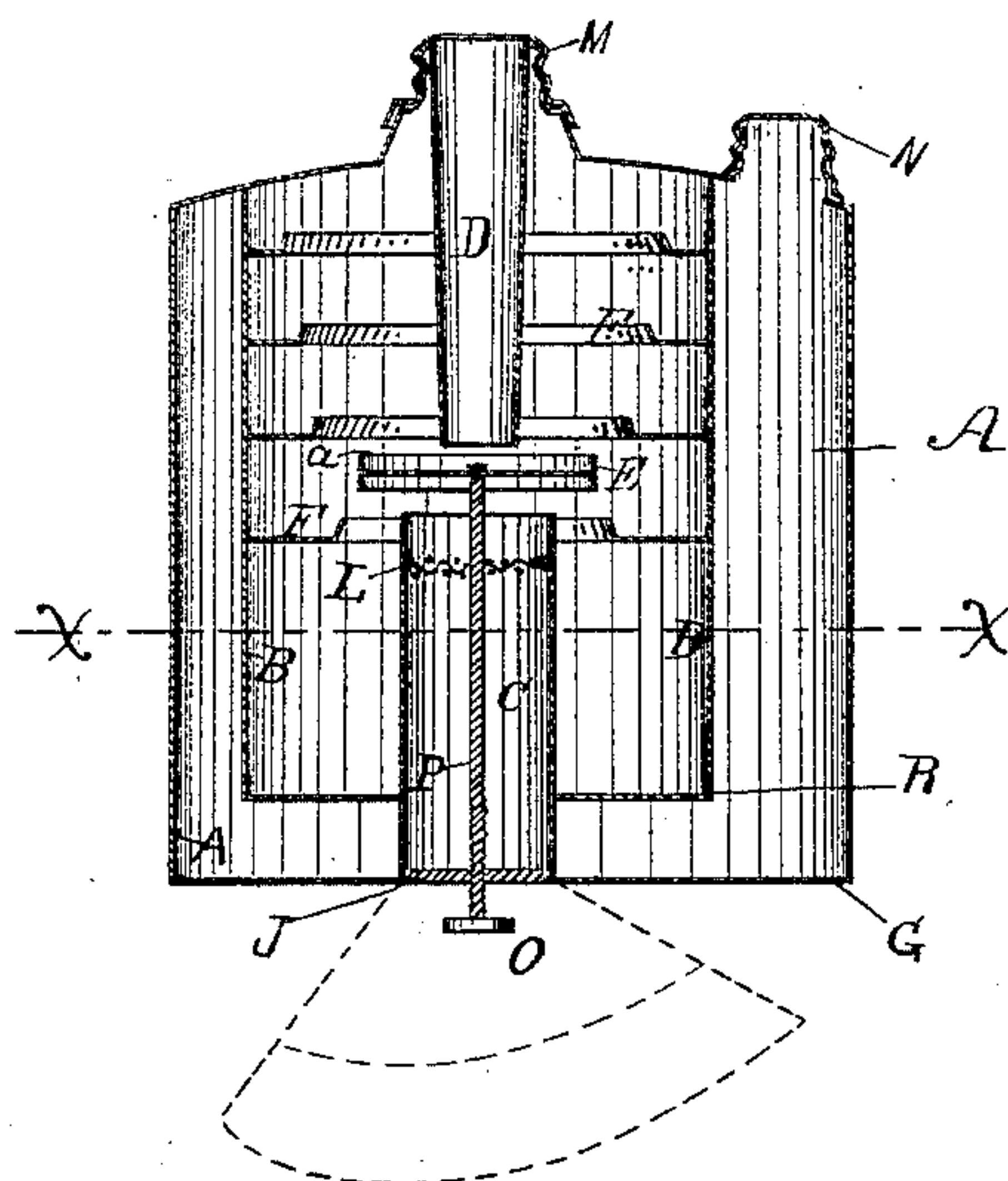
(No Model.)

M. W. HOBBS.  
INHALING DEVICE.

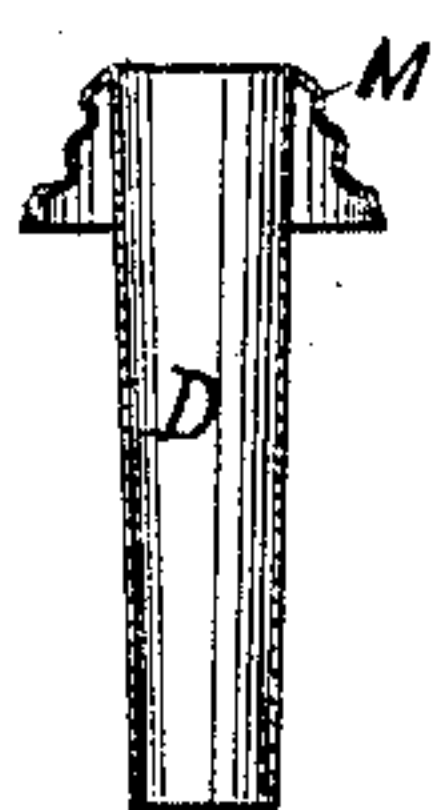
No. 353,220.

Patented Nov. 23, 1886.

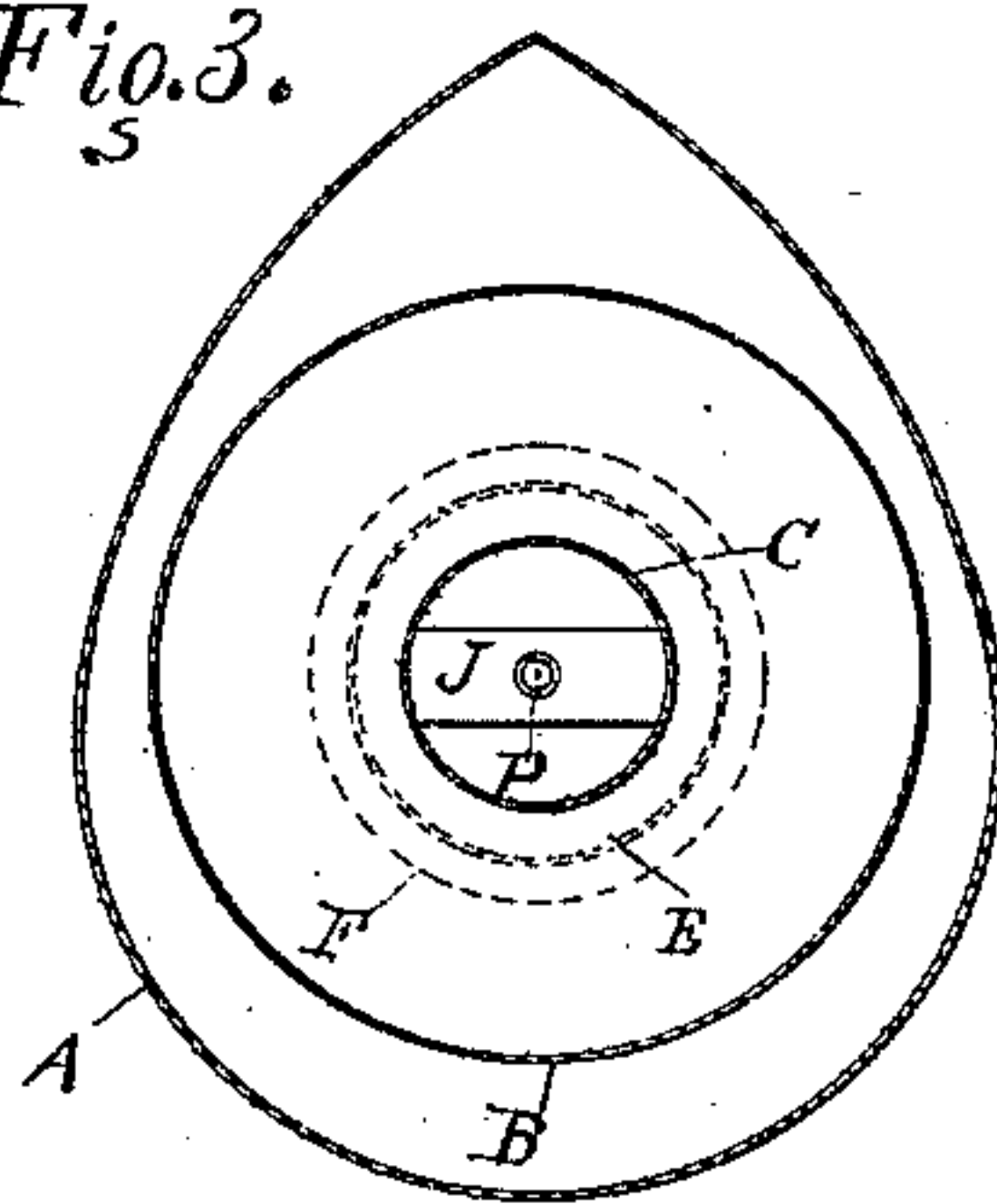
*Fig. 1.*



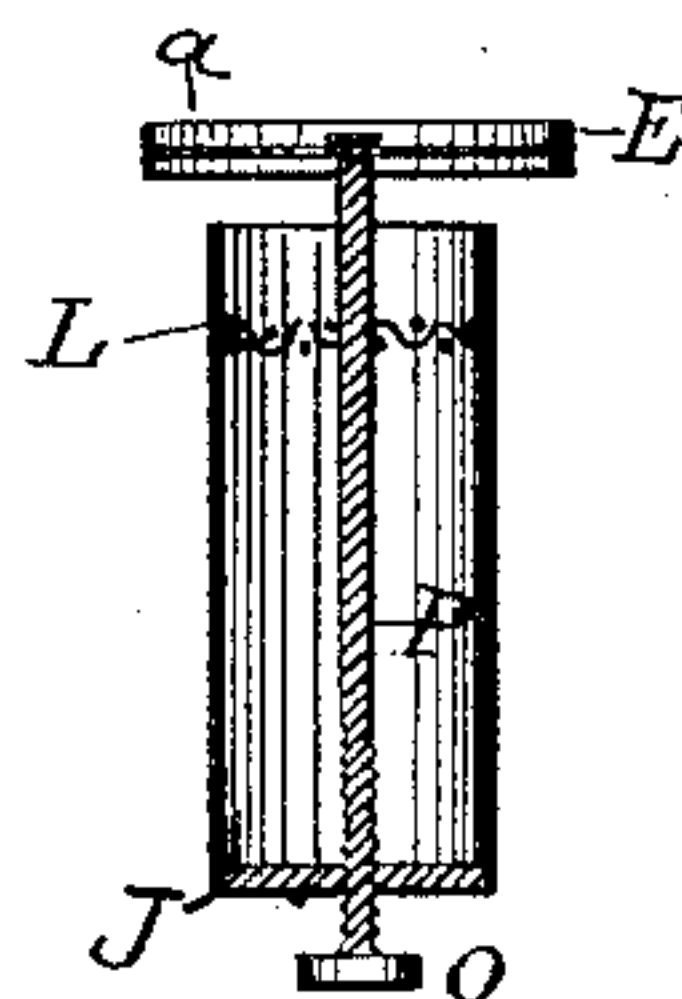
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses.*

*Ben. Goodman.*

*T. F. Harrington.*

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*Marmaduke Weldon Hobbs.*

# UNITED STATES PATENT OFFICE.

MARMADUKE W. HOBBS, OF RICHMOND, INDIANA.

## INHALING DEVICE.

SPECIFICATION forming part of Letters Patent No. 353,220, dated November 23, 1886.

Application filed March 10, 1886. Serial No. 194,711. (No model.)

*To all whom it may concern:*

Be it known that I, MARMADUKE WELDON HOBBS, of Richmond, in the county of Wayne and State of Indiana, have invented certain  
5 Improvements in Inhalers, of which the following is a specification.

I have previously made an application (which has been allowed) for an inhaler and respirator of the same general class or character as this.

The present improvement relates to an adjustable disk or valve employed for regulating the admission of air into the instrument when in use, and for closing one of its air-openings  
15 when the instrument is not in use; also, to the provision of shelves or shallow trays for holding the substance to be inhaled; also, to a removable air-induction tube, all as hereinafter described and claimed.

20 In the accompanying drawings, Figure 1 is a central vertical section of my improved instrument. Fig. 2 is a central longitudinal section of the air-induction tube. Fig. 3 is a horizontal section of the instrument on line  $z z$ ,  
25 Fig. 1. Fig. 4 is a central longitudinal section of the air-induction tube and the valve attachment.

The can A is designed to contain warm or hot water, which may be introduced and discharged through an opening closed by a removable screw-cap, N. Within this can A is arranged the receptacle B, for the ether or other substance to be inhaled. It is attached to and pendent from the top of the can, and  
35 of such dimensions that a narrow space exists between the sides and bottoms of the two receptacles A B, so that the inner one, B, is mainly surrounded by the heating agent when the instrument is in use. There is an opening  
40 in both the top and bottom of can A. A vertical tube, C, is attached to the bottom around the opening therein, and projects up through the bottom of the inner receptacle, B. Near the top of said tube a wire-gauze diaphragm,  
45 L, is arranged, and a narrow transverse bar, J, is fixed in the bottom. The stem or rod P of the valve E passes through these parts L J, and is screw-threaded where it works through bar J, to adapt it to be adjusted up or down  
50 to shift the position of the valve E, as required, to regulate the admission of air through the tube D. A milled disk, O, is attached to

the lower end of the valve-rod for use in rotating it. The tube D is pendent from the top of the can A, and has a screw-flange around  
55 the opening in said top. The valve E is a flat imperforate plate or disk, having a vertical flange,  $a$ , around its edge, the function of which will be presently explained.

Around the inner side of receptacle B are  
60 arranged several narrow shelves or annular trays, F, having their inner edges turned upward to adapt them to hold the liquid to be inhaled.

The manner of using the instrument is as  
65 follows: The can A is first filled with water of the temper required to produce rapid evaporation of the inhalent. The latter is introduced through tube D; or, by inverting the instrument, it may be poured in through the  
70 lower tube, C. This latter method is preferable, since the liquid is thus collected around the base of tube D, and when the instrument is reversed to its normal position the liquid fills the trays F. To insure this result, they  
75 are made of gradually-increased width from the top downward, as shown. The valve E being now adjusted so as to leave the inner ends of both tubes C D open, it is obvious that air drawn through the instrument will become  
80 charged with the inhalent. By adjusting the valve up or down the volume of air thus passed through in a given time may be regulated at will, for such adjustment will cause the valve to approach more or less closely to the adjacent end of one of the tubes, C and D. When  
85 the inhalation has been completed, the water is discharged, and a cork stopper may be inserted in the mouth of the tube D, and the valve E adjusted downward to close the inner  
90 end of tube C. Thus the volatile inhalent will be confined, so that no loss will occur from evaporation while the instrument remains unused. If it is preferred to remove the inhalent after each use of the instrument, it is only  
95 necessary to screw out the tube D.

In my former invention, before referred to, I have provided a fixed plate in place of the present adjustable valve or disk E, and such plate has a pendent flange to prevent any of  
100 the liquid poured in through tube D from passing out through the lower tube, C. In this case the flange around valve E will not only prevent such result, but also prevent the



liquid passing into tube D when poured in through the lower tube, C.

What I claim is—

1. In an inhaling-instrument, the combination, with the receptacle B and an air-tube projecting into it, of a valve or disk which is adjustable toward or from the mouth of said tube, for the purpose stated.

2. In an inhaling-instrument, the combination, with the receptacle B, the bar J, and an air-education tube, of the valve E, and the screw-rod P, for adjusting the latter, as shown and described.

3. In an inhaling-instrument, the combination, with the air-induction tube and air-education tube and receptacle B, of the disk E, arranged between the inner ends of these tubes and having a peripheral flange which projects in each direction or toward each tube, as shown and described, to operate as specified.

MARMADUKE W. HOBBS.

Witnesses:

H. TEUGEN,

O. W. COGGSHALL.