

(No Model.)

G. MEYER.

INHALER.

No. 280,321.

Patented June 26, 1883.

Fig. 1.

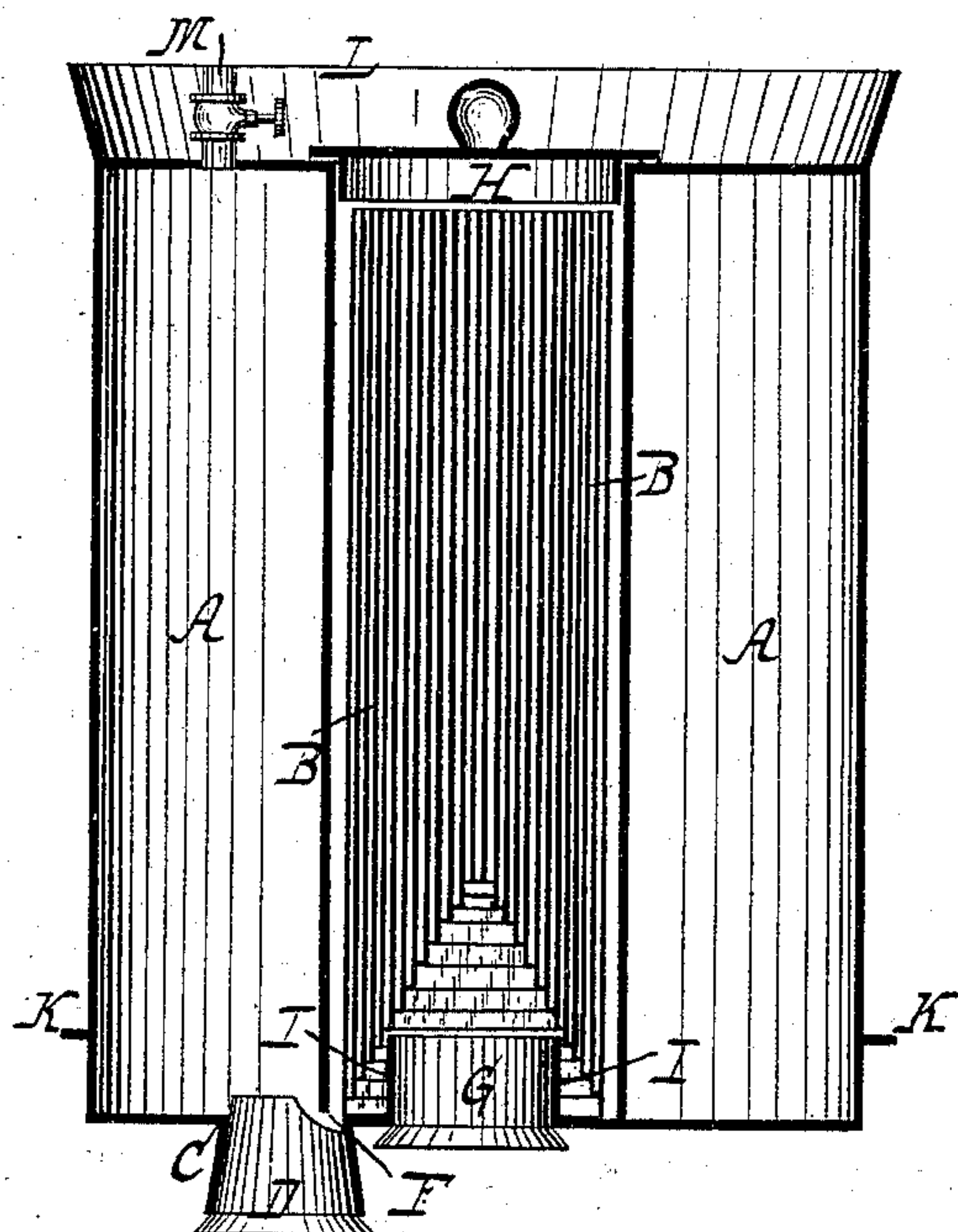
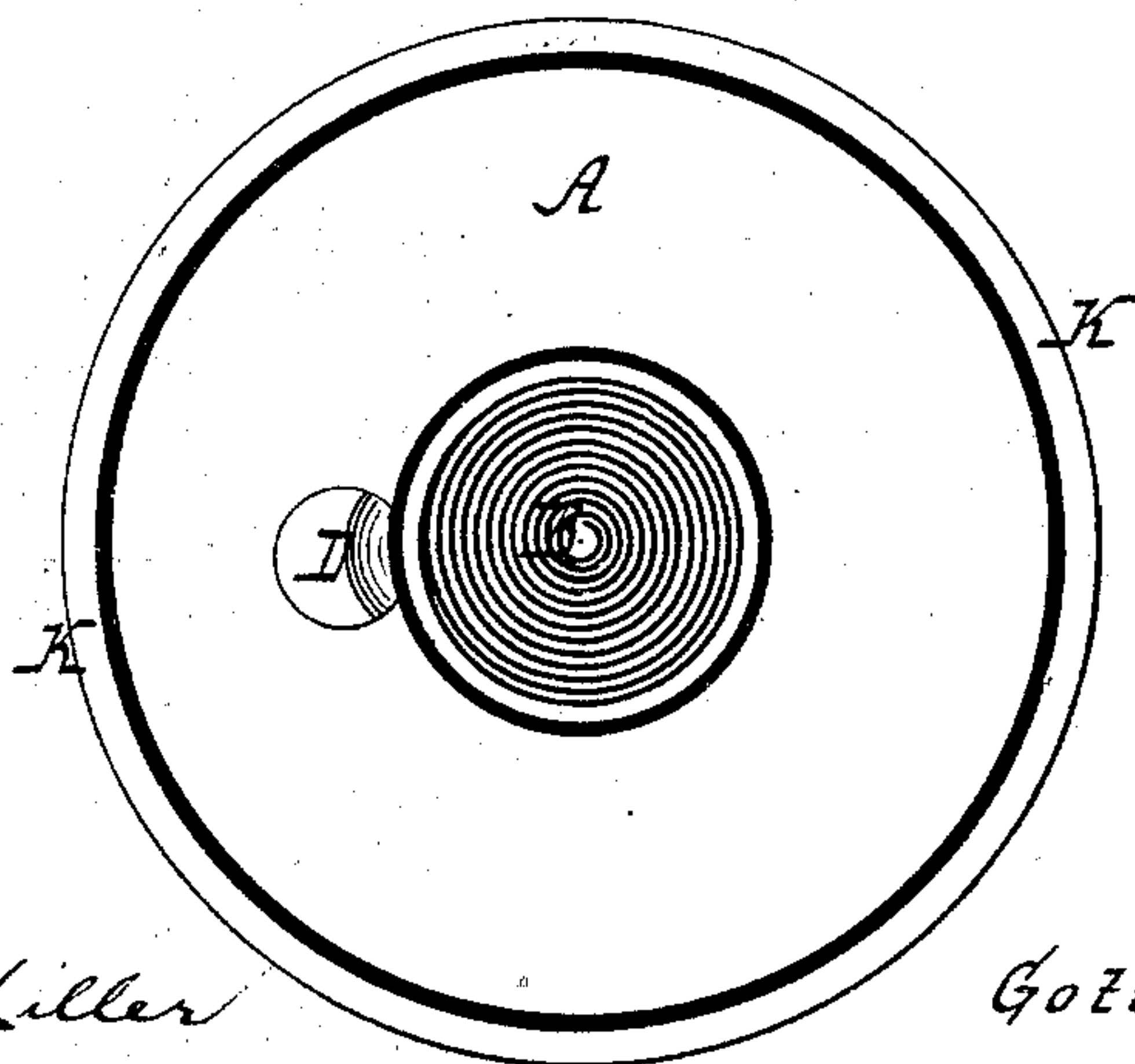


Fig. 2.



WITNESSES:

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INHALER.

SPECIFICATION forming part of Letters Patent No. 280,321, dated June 26, 1883.

Application filed May 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, GOTTFRIED MEYER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Anæsthetic Inhalers, of which the following is a specification.

This invention relates to an inhaler or apparatus especially adapted for the administration of anæsthetic agents, the same consisting of a reservoir or receiving-chamber and a respiratory chamber communicating with the reservoir; and the invention consists in the arrangements, as hereinafter more fully described, and pointed out in the claims. Means for intercepting the communication between the reservoir and the respiratory-chamber may be provided. The whole apparatus is arranged to be securely closed when not in use, and so avoid loss or waste.

In the accompanying drawings, Figure 1 shows a vertical central section of the apparatus. Fig. 2 is a transverse section of the apparatus.

Similar letters indicate corresponding parts.

The letter A designates the receiving-chamber or reservoir, which is preferably made of an oval or cylindrical shape, surrounding the respiratory-chamber B. This form of construction is advantageous, as it enables the apparatus to be made in a compact shape and readily carried.

The reservoir or receiving-chamber, as shown, is a closed vessel, having an opening, C, for the introduction into the reservoir of the anæsthetic. The opening C is shown as closed by a cork, D. The cork D is preferably made of some soft pliable material which will not allow the anæsthetic to escape—as, for example, of rubber or cork.

The respiratory-chamber B is separated from the reservoir A by a partition, a channel or passage, F, at or near the bottom of the reservoir A, allowing the flow or passage into the respiratory-chamber B of part of the contents of the reservoir A. The respiratory-chamber B is open at both ends, and is adapted to be securely closed by corks or covers G H, which fit tightly, so that none of the contents will escape when the apparatus is not in use. The bottom of the respiratory-chamber B has an

elevation or rim, I, which prevents that part of the contents which flows from the reservoir A into the respiratory-chamber B from running out of the latter before it is absorbed by the absorbent in the same manner as a lamp-wick draws up oil. The respiratory-chamber B has placed in it an absorbent, which is so loosely packed as to allow free passage of air through it. The absorbent may be obtained by taking bandage material or any open-meshed material, which a physician or surgeon usually has ready at hand, and rolling it loosely into the form of a roller bandage and inserting the same into the respiratory-chamber B. When properly inserted, the absorbent loosely fills the respiratory-chamber B and passes down to the bottom thereof, inside of the rim I. It thus absorbs the anæsthetic, which flows from the reservoir A through the channel F.

The apparatus is designed to be used as follows: A face-piece is applied to the lower end of the apparatus, a rim, K, being provided for the proper adjustment of the face-piece. The face-piece may be formed by simply wrapping one edge of a towel, having inclosed a piece of paper to stiffen it, about the lower end and the rim K K of the apparatus, and placing the other end of the tube or funnel thus formed by the towel over the face of the person to be treated. The respiratory-chamber D being opened at both ends, the air which is inhaled by the person under treatment, flowing freely through the absorbent, now saturated with the anæsthetic in the respiratory-chamber, becomes impregnated with the anæsthetic and rapidly causes insensibility, while no impediment to breathing is caused. As soon as the desired object is accomplished the respiratory-chamber is closed, and the apparatus may be put aside until again to be used, no loss of the anæsthetic meanwhile taking place.

As shown in the drawings, the cork D has a part thereof cut or hollowed out, and when this side of the cork is turned toward the channel F said channel is open and offers communication between the chambers A B. By simply turning the cork D so that a full portion of the same faces the partition between the two chambers, the channel F is closed, shutting the contents of the reservoir A off from

the respiratory-chamber B and offering further security against loss or waste of the anæsthetic. This arrangement is also advantageous when the respiratory-chamber is to be cleaned out or supplied with fresh absorbent without disturbing the contents of the reservoir A.

Of course the apparatus may be modified in various ways without departing from the spirit of my invention—as, for example, in place of the channel F in the partition, I may have a tube at or near the bottom of the reservoir A, through which the anæsthetic is led from said reservoir into the respiratory-chamber, and this tube may be provided with a stop-cock or similar appliance for shutting off the connection. Also, the filling-opening C of the reservoir A, instead of being closed by a cork, may be closed by a screw-stopper, or it may be provided with a funnel or filling-tube having a stop-cock, or by any other suitable and securely closing device. The corks G H may also have similar substitutes put in their places. The device, as shown in the drawings, is, however, a satisfactory one, as it requires very little soldering and as it has no attachments which are liable to break off or get out of order, and is cheap and durable.

The whole device can be made in compact form and can be conveniently carried by the operator to the place where required.

When the reservoir A is to be filled the apparatus is caused to stand on the rim L at its top, which rim is of sufficient height to offer a firm base. The inlet C is then opened and the reservoir filled, after which the inlet C is closed, and, as before observed, the anæsthetic remains inclosed in the apparatus until used in practice, no loss or waste meantime taking place.

The apparatus is constructed of sheet metal or of any other suitable material, and the corks may be made of metal, which may be surrounded by packing material, or of rubber or of any other suitable impervious material.

As shown in the drawings, one opening of the respiratory-chamber B is closed by a cover, H, which can be made to fit tightly by means of a packing-ring, and this opening is larger than the opposite opening. Through the larger opening the roll of absorbent material can be readily introduced into or withdrawn from the respiratory-chamber B, and it is prevented from falling out at the smaller end by resting upon the edge inside the rim I. Also, the filling-opening C, instead of being placed at the

bottom of the device, may be formed on its side or at the top, if desired.

To let in air to fill the space left empty by the anæsthetic flowing out of the reservoir, an air-inlet tube or opening, M, provided with a stop-cock, is provided at or near the top of the apparatus. Another way of supplying air is by having an inlet-opening in the cork D and a tube passing from the same within the reservoir up to the top or near the top of the said reservoir A. This latter arrangement is the simpler, as it dispenses with the additional attachment M and facilitates the shutting off of the anæsthetic. For example, if the air-inlet is formed in the side of the filling-spout C and communicates with a corresponding opening or inlet through the cork D, the air will only enter while the air-inlet of the filling-spout C and the mouth of the air-inlet through the cork D are contiguous, and by simply turning the cork D the flow of air is shut off.

The base L is shown in the drawings as having a flaring edge, so as to allow the apparatus to stand firm; but it may occasionally be well to make said base with the edge on line or continuous with the outer wall of the apparatus—as, for example, when several apparatuses are to be packed for shipment, as it allows them to lie closer together.

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

1. An inhaler having a reservoir arranged concentrically with a respiratory-chamber, the two chambers being connected by a passage, F, and a vertical flange, I, concentric with the partition between the chambers A and B, and means for controlling the flow of material from the reservoir A to the chamber B, all combined and adapted to serve with an absorbent material, substantially as described.

2. In combination with the case having ledge K, and the partition forming the chambers A and B, connected as at F, the flange I, and stopper D, cut away as shown, all constructed and arranged to serve with an absorbent material located in the open chamber B, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

GOTTFRIED MEYER. [L. s.]

Witnesses:

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WM. C. HAUFF.