

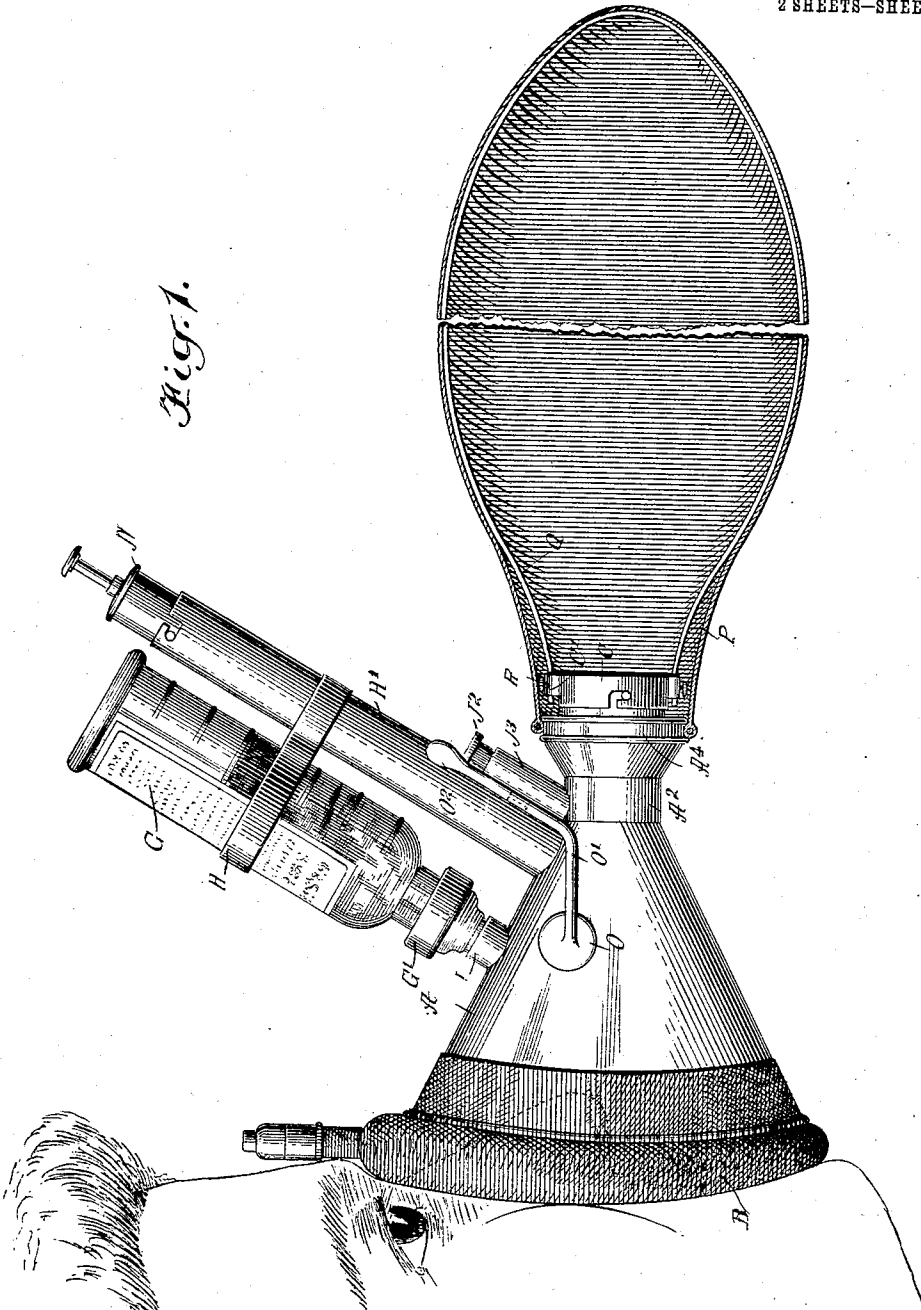
M. J. WUNDERLICH.
 APPARATUS FOR ADMINISTERING ANESTHETICS.
 APPLICATION FILED NOV. 8, 1909.

968,306.

Patented Aug. 23, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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APPARATUS FOR ADMINISTERING ANESTHETICS.

968,306.

Specification of Letters Patent.

Patented Aug. 23, 1910.

Application filed November 8, 1909. Serial No. 526,765.

To all whom it may concern:

Be it known that I, MARIO J. WUNDERLICH, a citizen of Guatemala, and a resident of Guatemala, Guatemala, Central America, have invented a new and Improved Apparatus for Administering Anesthetics, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved apparatus for administering anesthetics, which is simple, durable and compact in construction, easily sterilized, readily manipulated with one hand and arranged to prevent the waste of the anesthetic, to allow gradual administering of the anesthetic to the patient and to store the mixture of the exhalations and the anesthetic gas in a magazine for use whenever required.

For the purpose mentioned, use is made of an inhaling funnel, adapted to contain in its apex end an absorbent material for the anesthetic, a support on the funnel for removably supporting a receptacle containing the anesthetic, and a pipe opening into the said funnel apex and adapted to connect with the said receptacle, to allow the liquid anesthetic to readily flow into the said apex of the funnel and to the absorbent material held therein.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the apparatus as applied, the magazine being shown in section; Fig. 2 is an enlarged sectional side elevation of the same; Fig. 3 is an inverted sectional plan view of the funnel; and Fig. 4 is a front elevation of the same.

The funnel A, of metal or other suitable material, is provided at its mouth A' with a removable inflatable ring B, of rubber or other suitable material, to snugly fit the face of the patient under treatment, and thus prevent escape of the anesthetic gas at this point. At the apex of the funnel A is secured a tube A², adapted to receive at its outer end a removable collar C, carrying a centrally-disposed spiral D for receiving and supporting an absorbent material E, such as absorbent cotton and the like. Onto the ab-

sorbent material E discharges one end of a pipe or a tube F extending along the inside of the funnel A at the top thereof and then passing through the wall of the funnel to the outside thereof, the outer end of the pipe or tube F terminating in a threaded portion F' adapted to screw through the cap G' of a receptacle G containing the anesthetic, and held in a supporting ring H attached by a tube H' to the funnel A, as plainly indicated in the drawings. The receptacle G is usually made of glass, while the cap G' is made of lead, and the cap G' fits into a retaining ring I attached to the outside of the funnel A at the top thereof, the said retaining ring I and the threaded portion F' of the tube being concentric. The inner or discharge end F² of the pipe F is normally closed by a valve J having its valve stem J' terminating in a tubular finger piece J² mounted to slide in a cylinder J³ attached to the outside of the tube A² of the funnel A. A spring K contained within the cylinder J³ presses the finger piece J² to normally hold the valve J to its seat on the end F² of the pipe F, thus closing the same. When the finger piece J² is pressed by the operator, the valve J is opened so that the liquid anesthetic contained in the receptacle G can flow by way of the pipe F onto the absorbent material E to be vaporized thereon and to be inhaled by the patient under treatment. When it is desired to produce a short anesthesia then use is made of a glass capsule L held in the tube H' and having its point L' abutting against an inclined plate H² attached to the inside of the tube H' at the bottom thereof. The outer end of the tube is provided with a plunger N, under the control of the operator, for pressing the glass tube L inward so as to break the point L', to allow the contents of the capsule L to flow into the lower end of the tube H' and from the same by way of the pipe F directly onto the absorbent material E to be vaporized thereon and to be inhaled by the patient.

In the side wall of the funnel A is arranged a vent opening A³, normally closed by a vent valve O held on a spring-pressed lever O' fulcrumed on the outside of the tube H' and under the control of the operator. The finger piece O² of the lever O' is in close proximity to the finger piece J²

so that the operator having hold of the funnel with one hand can readily manipulate the valves J and O for controlling the flow of the anesthetic or the admission of air to the funnel, as may be required. On the outer end of the tube A² of the funnel A is arranged a ring A⁴, adapted to receive the mouth of a bag P, of rubber or other suitable material, and held in an extended rearward position by a suitable skeleton frame Q, of wire, fastened in sockets C' on the collar C by the use of set screws R, as will be readily understood by reference to Fig. 2.

By the arrangement described any exhalations of the patient are forced through the funnel A into the bag P, to be stored therein together with any anesthetic gas carried along by the exhalations.

In using the device, the ring B is held in contact with the face of the patient to inclose the mouth and nose as indicated in Fig. 1, and then the operator presses the finger piece J² to open the valve J and thus allow some of the liquid anesthetic to flow from the receptacle G by way of the pipe F' onto the absorbent material E to be vaporized thereon and the gas inhaled by the patient, to produce the desired anesthesia. By the operator releasing the finger piece J², the valve J closes to shut off the flow of the liquid anesthetic, and by the operator holding the valve J open a desired length of time, the proper amount of liquid anesthetic is allowed to pass into the funnel for producing anesthesia. The valve J can be repeatedly opened and closed by the operator pressing and releasing the finger piece J², so as to produce periodically sufficient gas to keep the patient under the narcotic the desired length of time.

By having the bag P connected with the funnel A, as described and shown, the exhalations of the patient are forced into the bag together with some of the gas produced by the evaporation of the liquid anesthetic on the absorbent material E, so that the bag serves as a magazine for the mixture, and which mixture can be inhaled by the patient to keep the same in anesthesia for some time without requiring the production of new gas in the funnel until the mixture is too weak or used up. From the foregoing it will be seen that the apparatus utilizes the liquid anesthetic very economically.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An apparatus for administering anesthetics, comprising a funnel adapted to support in its apex end an absorbent material, a support on the funnel for removably supporting in an up-side down position a receptacle containing the anesthetic fluid, a pipe adapted to connect with the mouth of the said receptacle and leading to the inside of

the funnel to discharge the anesthetic fluid onto the said absorbent material, and a manually-controlled valve mechanism for controlling the flow of the anesthetic fluid through the said pipe.

2. An apparatus for administering anesthetics, comprising a funnel provided at its apex with means for supporting an absorbent material, a tube supported by the funnel and having one end adjacent to the means for supporting the absorbent material and adapted to discharge upon the material supported by the said means, a normally closed valve for controlling the tube, means out-side of the funnel for opening the valve, and means for supporting a receptacle for the anesthetic in position to discharge into the said pipe.

3. An apparatus for administering anesthetics, comprising a funnel having at the apex end thereof means for supporting absorbent material, a pipe on the funnel and having one end in position to discharge upon the material supported by the funnel, a valve for closing the discharge end of the pipe, means out-side of the funnel for operating the valve, a chamber mounted on the said funnel and having an inclined bottom, the pipe having an opening communicating with the chamber, and a plunger in the chamber.

4. An apparatus for administering anesthetics, comprising a funnel having at the apex end thereof means for supporting absorbent material, a pipe on the funnel and having one end in position to discharge upon the material supported by the funnel, a valve for closing the discharge end of the pipe, means out-side of the funnel for operating the valve, a chamber mounted on the said funnel and having an inclined bottom, the pipe having an opening communicating with the chamber, a plunger in the chamber, and a bag connected with the apex of the funnel.

5. An apparatus for administering anesthetics, comprising a funnel having at the apex end thereof means for supporting absorbent material, a pipe on the funnel and having one end in position to discharge upon the material supported by the funnel, a valve for closing the discharge end of the pipe, means out-side of the funnel for operating the valve, a chamber mounted on the said funnel and having an inclined bottom, the pipe having an opening communicating with the chamber, a plunger in the chamber, a bag connected with the apex end of the funnel, and an inflated flexible ring for removable engagement with the mouth of the said funnel.

6. An apparatus for administering anesthetics, comprising a funnel having at the apex end thereof means for supporting a sheet of absorbent material in tubular form, a pipe on the funnel having one end in position to discharge on to the outer surface of

the absorbent material, a valve for controlling the pipe, means out-side of the funnel for operating the valve, and means on the funnel for supporting a receptacle for the
5 anesthetic in position to discharge into the pipe.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

MARIO J. WUNDERLICH.

Witnesses:

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