This invention relates to an improved apparatus for inhalations through the nose or the mouth.

One of the principal objects of the invention is to provide an apparatus of the character indicated that will assure a regular volatilization of the medicinal substances used and prevent irregular and non-uniform dosifications thereof.

Another object is to provide an apparatus by means of which the amount of the medicinal substance can be regulated and constant and uniform dosification thereof assured.

Another object is to provide an apparatus that will provide a uniform vaporization of the medicinal preparation.

Still a further general object is to provide an apparatus of the character indicated of compact and economical construction and which will permit a safe and convenient administration of the medicinal gases.

Generally, the purpose of the water vapours is to serve both as a discongesting means and as a carrier of the medicaments. These medicinal preparations, such as antiseptic or disinfectant means or therapeutic preparations are chosen according to the purpose which they are intended to serve.

The apparatus essentially consists of two superposed and intercommunicating receptacles, with a valve or a hand-key which controls this communication. The upper receptacle contains the medicinal preparation and the lower the water. A tube connected to the upper receptacle extends into the lower receptacle and joins with a coil and then proceeds to the mixing chamber which is within the mouthpiece of the outlet.

The water vapours which issue from the second receptacle, are associated with the vapours of the medicinal preparation to form a uniform mixture which may be administered through a cannula to the nose or the mouth.

Other objects and advantages inherent in the invention will become apparent from the following specification taken in conjunction with the accompanying drawing in which:

Fig. 1 is a central vertical section, in a side view of an apparatus according to the invention.

Fig. 2 is a rear elevation.

Fig. 3 is a top plan view.

Fig. 4 is a section through line 4--4 of Fig. 1, viz, through the plane wherein the key of the apparatus operates.

In the different figures of the drawing the same reference numbers indicate same or analogous parts.

With reference to the embodiment shown, the apparatus consists of the lower receptacle 1, provided at one side with the handle 2. The upper portion is provided with a bell-like cover 3 which may be screwed on by means of the screw threads 4. The receptacle 5 is detachably mounted in the neck of the cover 3 and provided with a hermetrical closure 6.

Between the lower receptacle 1 and the upper 5 is a passage 7 which terminates in tube 7a within receptacle 5. The bottom of the receptacle 5 is provided with a passage 8, which continues successively through tube 8a, the small chamber 8b and the coil 8c, all of which are within the lower receptacle 1, the coil 8c ending within the small mixing chamber 9 which forms part of mouthpiece 10.

The valve or key, shown in detail in Figure 4 controls simultaneously both passages 7 and 8.

It consists of a disc 11 with two orifices 12 and 13 which register in a certain position with said passages. This disc 11 has an axis 14 in its centre and a handle 15 for operating it. The disc 11 may be pivoted about its axis to bring openings 12 and 13 out of registry with the passages 7, 7a, 8, 8a to close these passages. It will be understood that the valve or key thus formed will be conveniently interposed between passages 7 and 8 for the control of the passage of a fluid or a substance selected.

The apparatus can be used as follows:

After unscrewing the lower receptacle 1 from the bell-like part 3, its interior is filled with a quantity of water up to level a (Fig. 1). After the apparatus has again been assembled, receptacle 5 is opened by unscrewing cover 3, so as to put therein the medicinal preparation approximately up to level b. Care should be taken that the key carried by disc 11 is in closed position.

After placing cover 3 again hermetically upon receptacle 5, receptacle 1 is subjected to a heating operation by means of any kind of heater, electric or otherwise.

After producing water vapour within said receptacle 1, the key will be opened by means of handle 15, thus giving access of the vapour (for equilibrating pressures) to receptacle 5 through passage 7 and tube 7a. At the same time the medicinal preparation contained in said receptacle will pass through passage 8 to tube 8a, chamber 8b and coil 8c, where it will become vaporized through the heat received from the water.

This vapor becomes mixed with the water vapour in chamber 9 of mouthpiece 10. The water vapour passes through the orifices 8a to said cham-
ber 9. This final mixture is administered through canula 10 of mouthpiece 10.

When it is desired to terminate the operation, the key is closed by means of handle 15, thus preserving the medicinal preparation for subsequent administration.

The small chamber 9 serves to store the medicament, which is condensed when the apparatus cools down.

It will be understood that the invention is not limited to the exact illustration shown in the drawing but may find expression within the scope of the following claims:

I claim:

1. An inhaling apparatus, comprising an upper receptacle and a lower receptacle, means for providing two separate passages connecting the interiors of said two receptacles with each other and for interrupting this connection, a vertical tube situated in said upper receptacle and having a lower end communicating with one of said passages and an upper open end situated close to the top of the upper receptacle, another tube situated within the lower receptacle and having an upper end communicating with the other one of said passages, means situated within said lower receptacle and constituting a separate chamber communicating with a lower end of said other tube, a coil situated within the lower receptacle and having one end communicating with said separate chamber, means connected with a wall of the lower receptacle and constituting a mixing chamber, a nozzle carried by the last-mentioned means and communicating with said mixing chamber, said wall of the lower receptacle having openings formed therein to provide a connection between said mixing chamber and the interior of said lower receptacle, and a tube having one end communicating with the other end of said coil and another open end situated within said mixing chamber.

2. An inhaling apparatus, comprising two receptacles situated one over the other, a valve body interconnecting the two receptacles and having two separate passages formed therein, a valve disc movably mounted in said valve body and having two openings formed therein and adapted to coincide with said passages to provide two different connections between the interiors of the two receptacles, a tube communicating with one of said passages and the interior of said upper receptacle, another tube situated within the lower receptacle and having one end communicating with the other one of said passages, a coil situated within the lower receptacle and means connecting one end of said coil with the other end of said other tube, means connected with a wall of the lower receptacle and constituting a mixing chamber, a nozzle carried by the last-mentioned means and communicating with said mixing chamber, said wall of the lower receptacle having openings formed therein to provide a connection between said mixing chamber and the interior of said lower receptacle, and a tube having one end communicating with said mixing chamber and another end communicating with the other end of said coil.

HORACIO PEIRANO.