No. 859,157. PATENTED JULY 2, 1907.

B. A. WARREN.

CHLOROFORM DROPPER.

APPLICATION FILED JUNE 27, 1905.

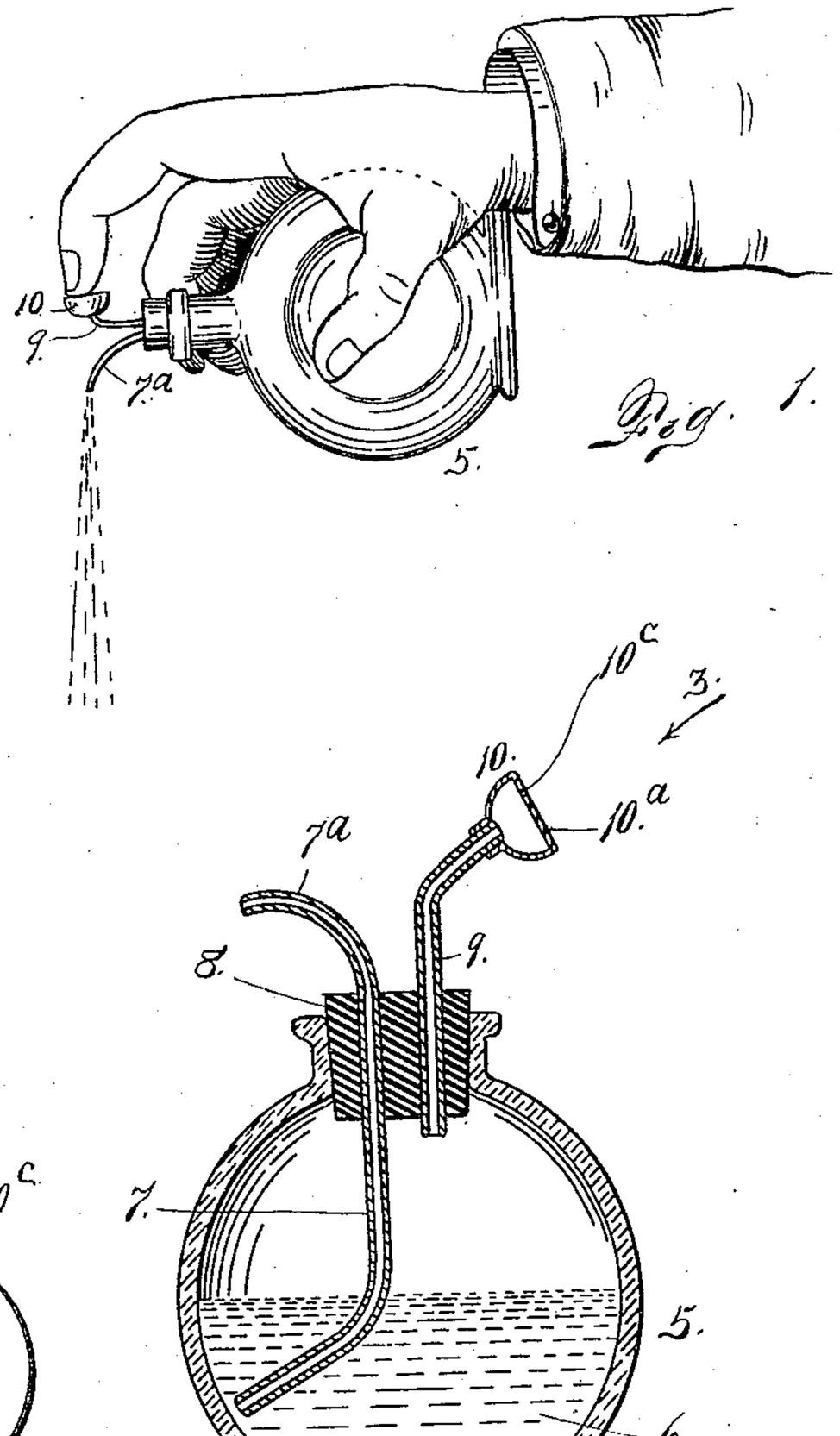


Fig. 1.

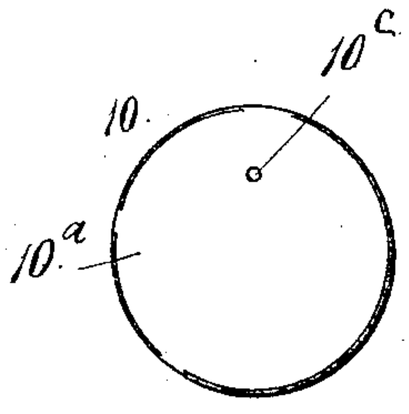


Fig 3.




Fig. 2.

Witnesses
Otto E. Hoddick.
Dena Nelson.

B. A. Warren.
Inventor.
By A. W. Brien
Attorney

# UNITED STATES PATENT OFFICE.

BACIL A. WARREN, OF LA SALLE, COLORADO.

## CHLOROFORM-DROPPER.

No. 859,157. Specification of Letters Patent. Patented July 2, 1907.

Application filed June 27, 1905. Serial No. 267,211.

*To all whom it may concern:*

Be it known that I, BACIL A. WARREN, a citizen of the United States, residing at La Salle, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Chloroform-Droppers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in devices more especially intended for use in administering a liquid anesthetic as chloroform.

It is well known that it is very important that exactly the proper quantity of the liquid is given to the patient or placed in such position that he shall inhale it. If too much is given, fatal results are liable to follow; while if too little is administered the patient is liable to revive and not only experience great suffering, but his struggles or movements are liable to greatly interfere with the work of the attending surgeon.

Heretofore I have been unable to obtain an instrument entirely satisfactory for the purpose stated, owing to the fact that it has been impossible to properly control the issue of the fluid from its receptacle. This control is accomplished by governing the entrance of air through the vent tube employed. In all instruments which I have seen, the vent tube has had its exterior opening of such size as to prevent accurate control by the operator. In order to overcome this difficulty, I provide the outer extremity of the vent tube with a hollow enlargement preferably bell-shaped or approximately semispherical, thus giving an outer surface of relatively large area, in which the vent orifice is formed. This outer wall is quite thin thus making it practicable to form a very small orifice therein and give the operator an opportunity to control the instrument, which is not possible with the ordinary vent tube since it is not practicable to form a passage in the body of the vent tube, so minute as to give the necessary accuracy of control, for several reasons, one of which is that a tube with an orifice sufficiently minute for the purpose, would easily become filled or stopped and great difficulty would therefore be experienced in keeping the passage open; whereas with my improved construction, if this exceedingly minute orifice in the bell-shaped extremity of the tube should become stopped, it is easy to open it with the point of a needle since the material in which it is formed is comparatively thin and the chamber within is of considerable size relatively speaking.

Having briefly outlined my improved construction as well as the function it is intended to perform, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a perspective view illustrating my improved device in use. Fig. 2 is a sectional view of the device shown in the upright position. Fig. 3 is a detail view of the bell-shaped extremity of the vent tube looking in the direction of the arrow in Fig. 2 but shown on a larger scale.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the receptacle for the liquid anesthetic 6 which should be sufficient in quantity to immerse the inner extremity of the exit tube 7 when the receptacle is tipped to the position shown in Fig. 1 or the desired position in order to allow the liquid to issue from the said tube. This tube passes through the cork 8 of the bottle or receptacle, its outer extremity $7^a$ being curved in such a manner that this extremity of the tube will point downwardly when the device is tipped for administering purposes. The vent tube 9 also passes through the cork, its inner extremity being always above the liquid contents of the bottle. To the outer extremity of this tube is applied an enlarged hollow part 10 preferably approximately semispherical and having a flat, rigid diaphragm or plate $10^a$ at its outer extremity in which is formed a small vent orifice $10^c$ adapted to be controlled by the finger of the user whereby more or less air may be allowed to enter the bottle according to the necessities of the case with reference to the discharge of the liquid from the bottle through the tube 7. As heretofore stated this orifice may be of any desired degree of minuteness, thus giving the operator perfect control of the device under all circumstances and for the purpose heretofore stated.

Having thus described my invention, what I claim is:

A device for administering a liquid antiseptic, provided with a discharge tube the inner extremity of said tube being bent so as to be constantly immerged in the liquid when in pouring position, a vent tube whose outer extremity is substantially bell-shaped and provided with a thin flat diaphragm of suitable material formed with a minute perforation therein for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

BACIL A. WARREN.

Witnesses:
MARGARET WARREN,
MAUDE ROYCE.