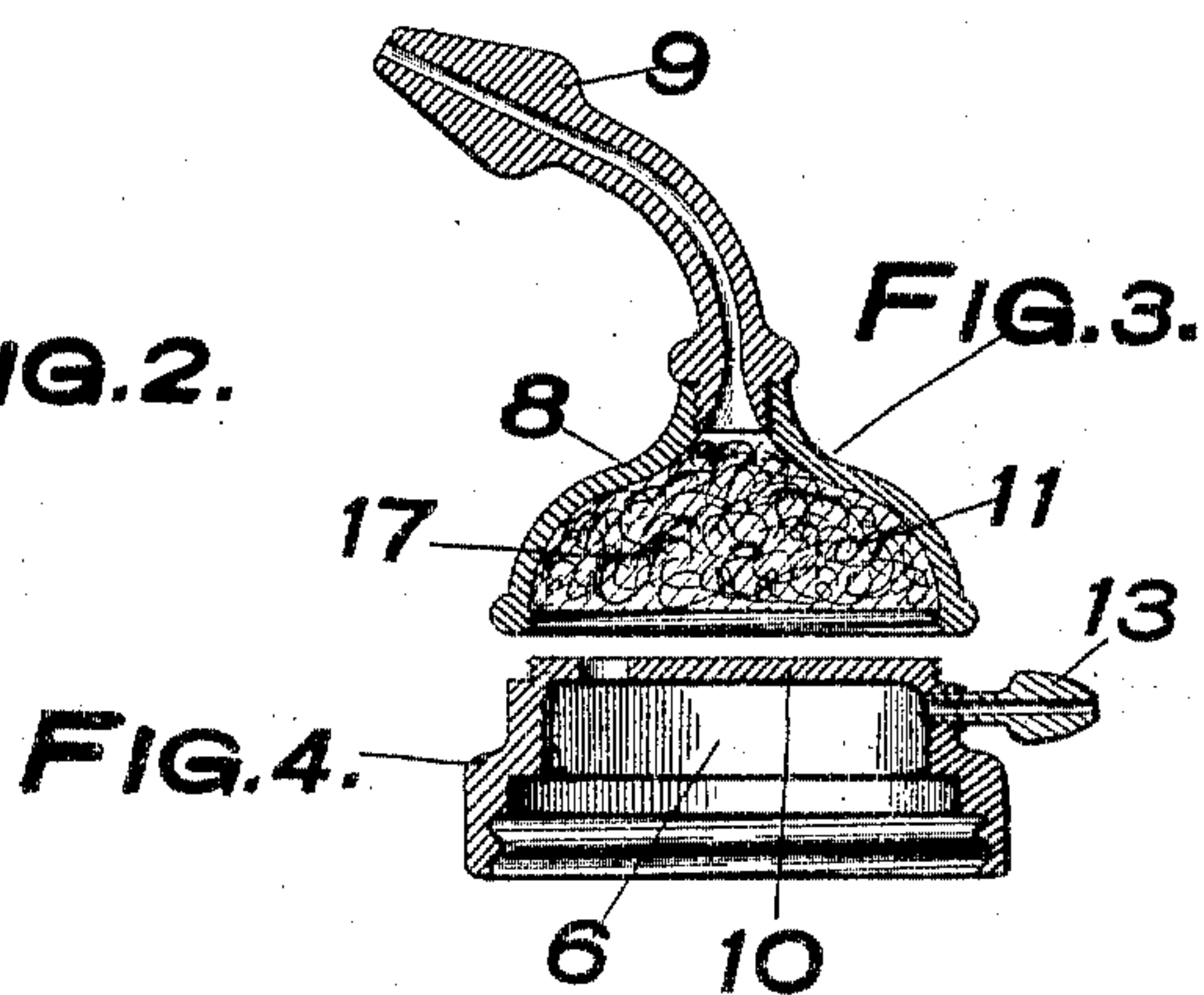
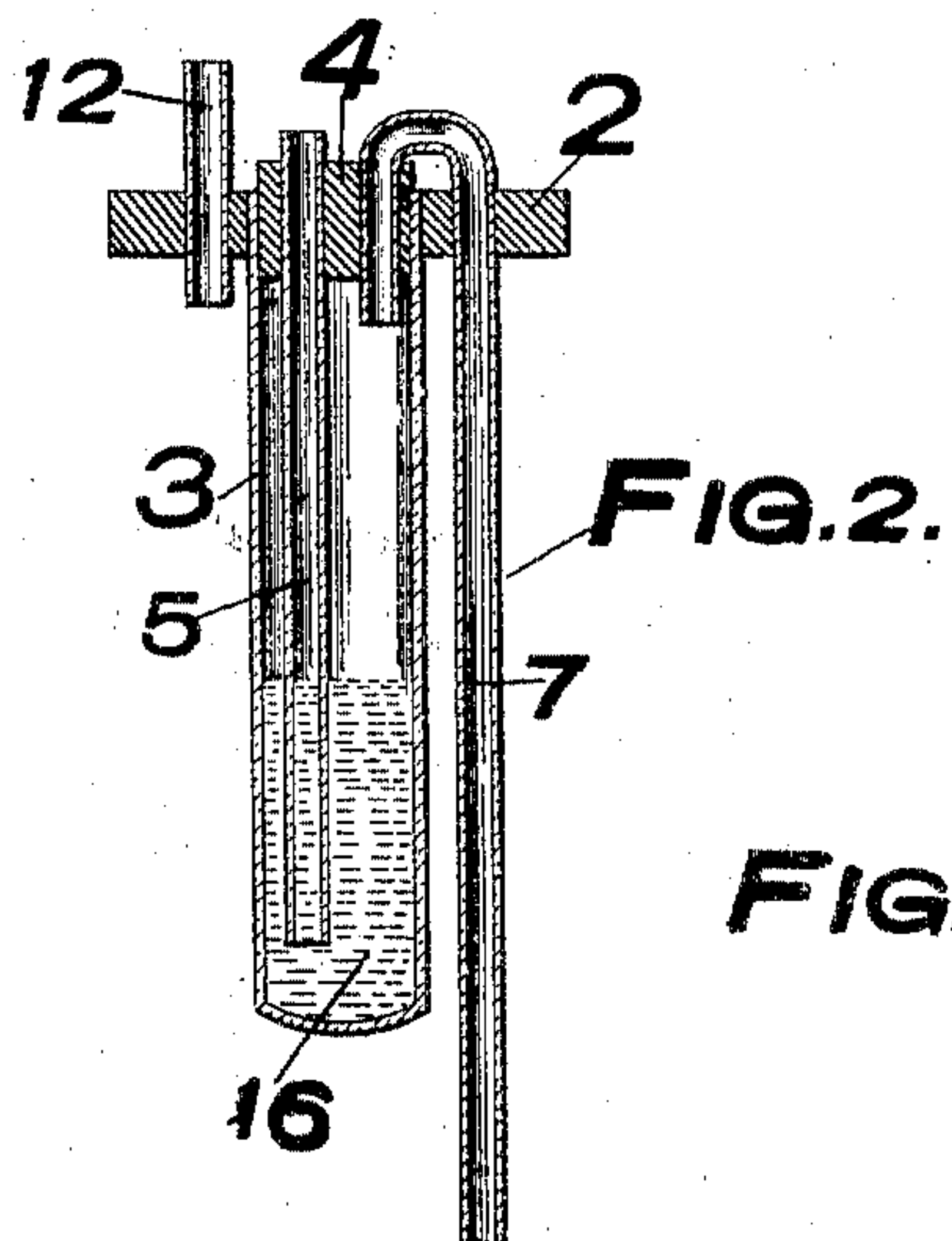
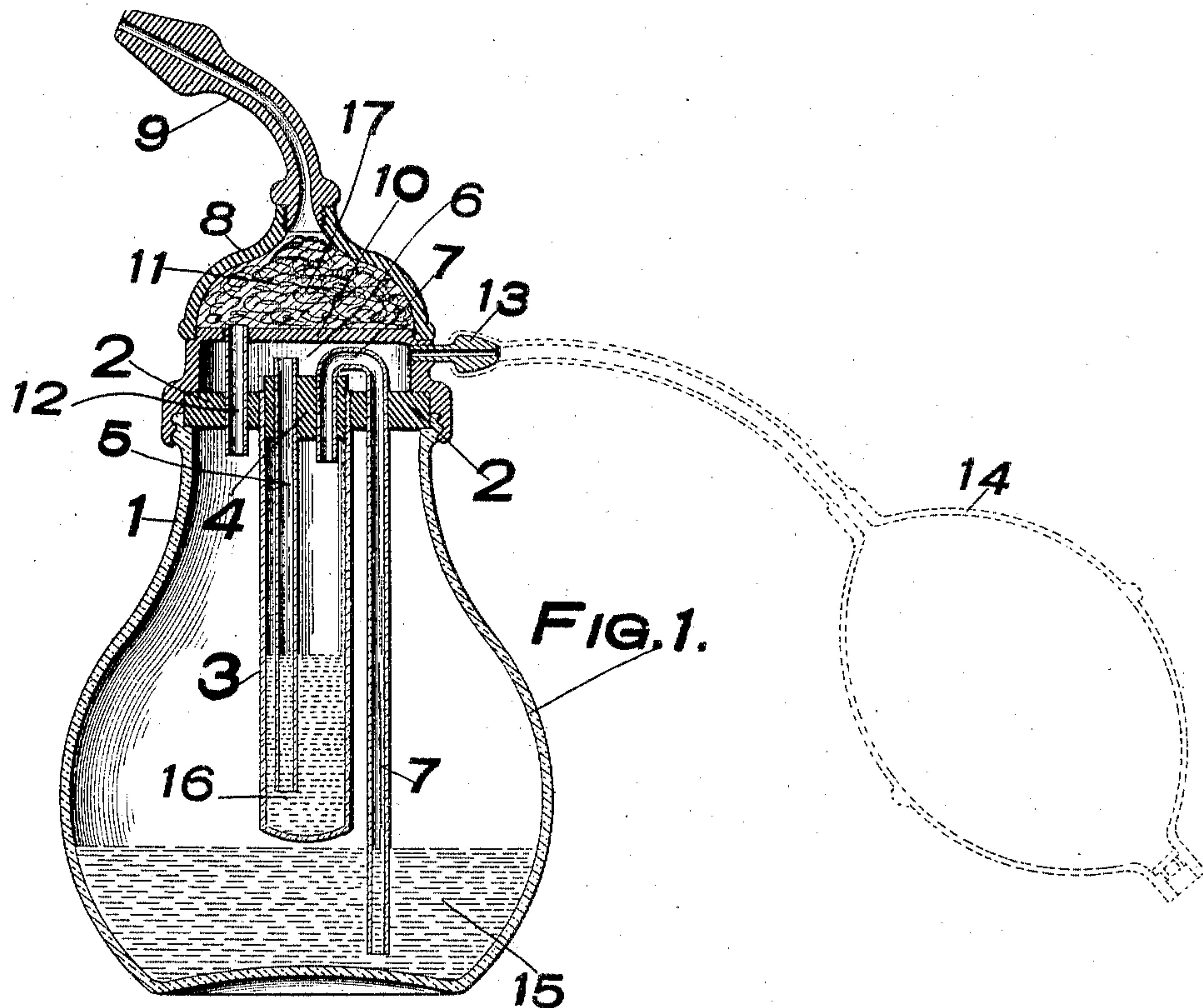


No. 780,077.

PATENTED JAN. 17, 1905.

J. E. VAN NESS.
MEDICAL VAPORIZER.
APPLICATION FILED SEPT. 9, 1903.



WITNESSES:

D. A. Pauberschmitt
S. Shotwell.

INVENTOR:
James E. Van Ness.
By Oscar Snell,
att'y.

UNITED STATES PATENT OFFICE.

JAMES E. VAN NESS, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
SOPHIE W. GAGE, OF EVANSTON, ILLINOIS.

MEDICAL VAPORIZER.

SPECIFICATION forming part of Letters Patent No. 780,077, dated January 17, 1905.

Application filed September 9, 1903. Serial No. 172,469.

To all whom it may concern:

Be it known that I, JAMES E. VAN NESS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Medical Vaporizers, of which the following is a specification.

My invention relates to means for curing la grippe, catarrh, asthma, and other similar diseases by directly applying the medicine in the form of a spray or fog to the surface of the diseased parts; and my object is to produce a more effective instrument for this purpose than heretofore by being able to apply certain remedies in not only an economical manner, but in a very high degree of strength, if necessary, the same being hereinafter fully described, and is illustrated in the accompanying drawings, in which—

Figure 1 is an axial vertical section showing the several parts of the instrument and with the medicines in the proper relative positions. Fig. 2 is a detached sectional view of several of the parts shown in position in Fig. 1 to more plainly illustrate the interconnecting tubes for carrying the spray into and out of the different chambers. Fig. 3 is a detached sectional view of the top portion of the instrument and showing a medicine-chamber. Fig. 4 is a section of a collar which serves as a means for connecting the top portion shown in Fig. 3 with the main body of the large containing vessel, but serves as a diaphragm or partition to divide the top portion of the instrument into two chambers, as is hereinafter more fully described.

Similar numerals indicate like parts throughout the several views.

The main containing vessel 1 at the top is adapted to receive and retain a large rubber stopper 2, and through the center of the latter is disposed the top end portion of a glass containing vessel 3 of small size. The top of vessel 3 is provided with a stopper 4, through which is disposed a straight glass tube 5, whose lower end reaches almost to the bottom of the vessel, as shown. Another tube, 7, is inserted through stopper 4, with the top end within vessel 3, and being bent in an inverted-

U shape above stopper 4 is disposed down through the latter and into the main containing vessel 1, the lower end of the tube being close to the bottom of the vessel, as illustrated in Fig. 1, and serves as a passage-way between vessels 1 and 3.

At the top portion of main vessel 1 is secured a cap 8, having a bent hollow nozzle 9 at the top. A partition 10 separates the cap into two chambers 6 and 11, and a small tube 12 is disposed through stopper 2, across chamber 6, and through partition 10 to serve as a passage-way between chamber 11 and vessel 1.

A tube 13 leads into chamber 6 from the outside and may be attached to a rubber bulb, as indicated in the broken lines at 14, or be adapted to insertion into the mouth of the person operating the instrument.

Usually the main vessel 1 contains ammonia 15 and the small vessel 3 muriatic acid 16.

In the top chamber 11 is disposed a sponge 17, saturated with medicine, or the medicine may be in a lump or in any convenient form adapted to being absorbed by the spray or gas formed by the action of muriatic acid in contact with ammonia or any other spray or gas best adapted to cure or relieve the hereinbefore-named diseases.

The instrument may be used in two ways. If the patient inserts the nozzle 9 into the mouth and inhales, the outside air enters tube 13 and into chamber 6, thence down through tube 5 into the muriatic acid 16, producing an agitation and carrying with it sufficient acid in the form of spray so that when the air passes upwardly into the bent tube 7 and downwardly into the ammonia 15 a chemical reaction takes place and the main containing vessel is quickly filled with a dense fog of muriate of ammonia, which passes upwardly through short tube 12 into chamber 11 and through and around the medicine contained therein and then outwardly through nozzle 9 into the mouth and lungs of the patient, who may retain the fog for a short time so that it may be brought into contact with the entire respiratory surface. This same result may be attained by means of a rubber bulb attached at the outer end of tube 13, when,

if the bulb is squeezed, air is forced inwardly around in the same course as above described, which feature is adapted to use in treating infants or very weak patients who could not be trusted to take the proper amount of medicated air or gas best adapted to serve their particular case.

I claim as my invention—

1. In a medical vaporizer, an outer vessel, a cover for the same provided with two chambers, an inlet communicating with one of said chambers and an outlet with the other, an inner vessel in the outer vessel, said vessels being each adapted to contain a liquid, and the chamber a medicant, and means for establishing communication through said vessels and chamber from the inlet to the outlet.

2. In a medical vaporizer, an outer vessel, a perforated stopper therefor, a cover over the stopper provided with a perforated parti-

tion and an inlet below and an outlet above the partition, an inner vessel through said stopper and provided with a perforated stopper, and three tubes, one of which tubes is bent at one end and extends through both stoppers into both vessels, and one of the other tubes projects through the stopper of the inner vessel and the remaining tube projects through the stopper of the outer vessel and the partition, each of the vessels being adapted to contain a liquid and the chamber a medicant.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES E. VAN NESS.

Witnesses:

OSCAR SNELL,
CHARLES W. CRITCHLEY.