J. A. LEE.

PUMP FOR MEDICATING AIR.

APPLICATION FILED JAN. 11, 1910.

978,313. Patented Dec. 13, 1910.

Fig. 1.

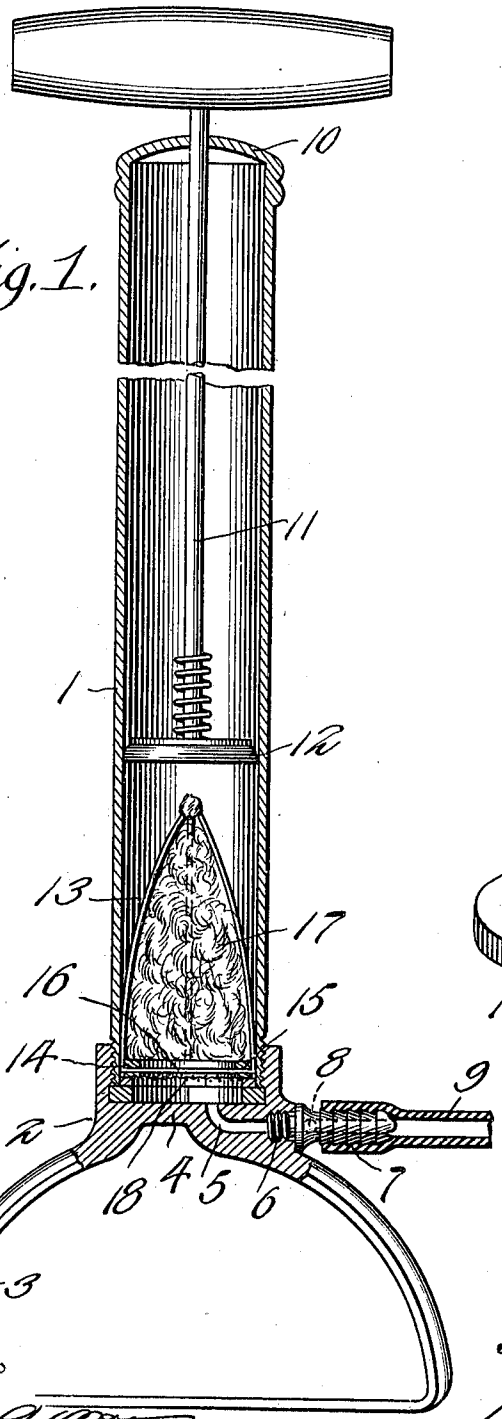
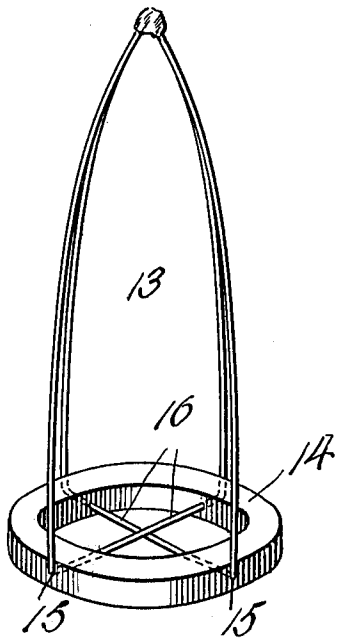


Fig. 2.



Witnesses

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PUMP FOR MEDICATING AIR.

978,313. Specification of Letters Patent. **Patented Dec. 13, 1910.**

Application filed January 11, 1910. Serial No. 537,469.

To all whom it may concern:

Be it known that I, JAMES A. LEE, a citizen of the United States, residing at Bellsville, in the county of Richland and State of Ohio, have invented new and useful Improvements in Pumps for Medicating Air, of which the following is a specification.

This invention relates to pumps, and has for an object to provide a device of this character wherein means are employed whereby the air passing from the pump will be rendered aseptic or medicated for medicinal, surgical or aseptic purposes, the said means consisting of a cage or container for the absorbent material which may be saturated with the desired solution and inserted in the barrel of the pump at a point immediately above the discharge thereof.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a detail vertical section taken through my improved pump. Fig. 2 is a detail perspective view of the removable cage.

My improved pump consists of a cylinder 1 whose lower exteriorly threaded end is mounted in the head member 2 of a foot-engaging base 3. The diaphragm 4 of the head member 2 is formed with a passage 5 whose outer extremity is threaded for the reception of the correspondingly threaded portion of the stem 6 of the check valve-carrying nipple 7. This nipple has mounted therein a check valve 8 which is adapted to open outwardly but to close inwardly as is obvious. A suitable hose 9 has one of its ends attached to the nipple and the other end may be attached to any well known form of instrument for introducing the medicated air to the patient.

The head 10 of the cylinder 1 is formed with a central perforation in which the rod 11 is movable. This rod is provided with a piston 12 which operates in the cylinder.

A cage 13 is located in the cylinder and it consists preferably of a fabric washer 14 which is adapted to be frictionally engaged with the walls of the cylinder at a point immediately above the passage 5 in the head member 2. The washer is provided with a plurality of pairs of passages 15 which receive the transverse connecting portions of arms 16. These arms are properly spaced from each other and at their upper ends they are secured together by solder or other suitable equivalent fastening means.

A suitable absorbent material 17 is confined between the arms 16 of the cage and it may be saturated with any suitable aseptic solution. Located in the cylinder 1 and disposed immediately beneath the washer 14 is a wire gauze disk 18 which is provided for the purpose of preventing lint or any particles of the absorbent material from being discharged into the conveying hose 9.

The construction of the device is such as will render possible the administration of medicated air to the patient in a novel and very convenient manner.

It will of course be understood that I do not rely particularly upon the provision of a hose adapted to be attached to an ejecting instrument for it is obvious that the air instead of being conveyed directly from the pump to the patient can be stored in a suitable tank or receptacle.

I claim:—

A pump for medicating air comprising a cylinder having an outlet at one end, a plunger operating in the cylinder, a cage located in the cylinder at a point adjacent to the outlet thereof, the said cage comprising a cylindrical washer-like base member and spaced pairs of horizontal arms which extend through the said cylindrical washer-like base member and upwardly in arcuate form from the base member and having their upper terminals connected together, the said arms forming an openwork bottom for the said washer-like member, absorbent material confined between the upwardly extending arcuate portions of the arms of the cage, and a member of foraminous material located directly beneath the said washer-like member.

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

JAMES A. LEE.

Witnesses:

JAMES MCINTOSH,

CHAS. A. REAL.