(No Model.)

W. S. McLEAN.

APPARATUS FOR HEATING AND MEDICATING COMPRESSED AIR.

No. 514,956. Patented Feb. 20, 1894.

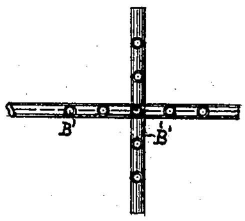

FIG. III.

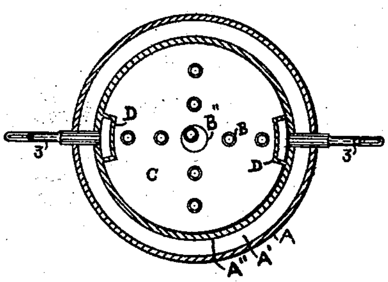

FIG. II.

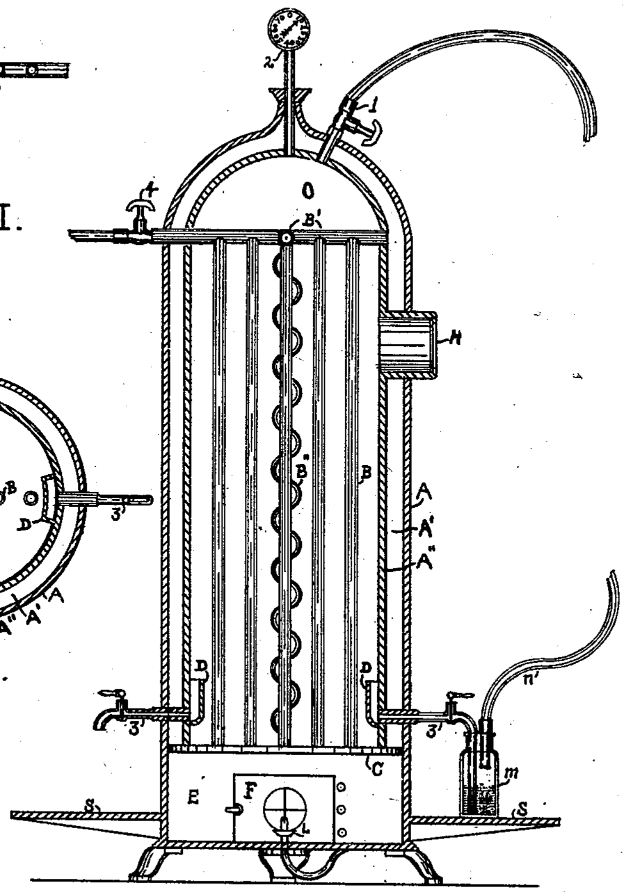

FIG. I.

WITNESSES:

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APPARATUS FOR HEATING AND MEDICATING COMPRESSED AIR.

SPECIFICATION forming part of Letters Patent No. 514,956, dated February 20, 1894.

Application filed October 19, 1893. Serial No. 488,579. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. McLEAN, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Apparatus for Heating and Medicating Compressed Air; 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 is an apparatus for heating and medicating compressed air and is an improvement upon the apparatus described in Letters Patent No. 489,029, granted to me on January 3, 1893.

The essential feature of this invention is the combining of an air heater and air compressor or reservoir in one article.

Figure 1 is a vertical section of the air compressor and heater. Fig. 2 is a horizontal section through the base of the heater. Fig. 3 is a top view of the pipes within the heater.

A is the outside of the air compressor or reservoir.

A′ is a space within the wall of the reservoir for filling the asbestus or other non-heat conducting material.

A″ is the inner wall of the reservoir. This reservoir is divided into two chambers, O the air receptacle, and E the lamp receptacle.

B, B are pipes opening into and extending from the heating chamber up through the air chamber O connected together at the top as shown in Fig. 3, and having a vent at this point through the walls of the air chamber, as 4.

1 is a tube passing through the walls and into the air chamber, to which is attached a tube or pipe connected to an air pump.

2 is a gage connected to the air chamber for the purpose of showing the degree of compression of the air within the chamber.

H is a heat register opening into the inside of the air chamber for the purpose of showing the degree of heat within the chamber. To these pipes are attached tubes connected to bottles containing medicated liquid, and the air is passed into the liquid in the bottles and taken out above the liquid as shown and described in said Letters Patent No. 489,029.

D, D are pockets or cups surrounding the openings into the pipes 3, 3 and having an opening at the top through which the air must pass into the pipes. The purpose of these cups is to interrupt or change the draft so that if the air is turned into one bottle while the stop cock leading into the other bottle is open and not in use, there will be less tendency to cause a draft through the open stop cock and to suck up the liquid from the bottle into the air receptacle.

C is the division between the air chamber and the lamp chamber and is provided with the opening shown in Fig. 2 into the pipes B, B. These pipes may be straight or coiled, as B″.

N is the tube leading from the bottle M through which the medicated air is taken to the mouth or nose.

S is a shelf attached to the outside wall of the air compressor and extending nearly around the same, upon which the bottles containing the medicated liquid are placed.

Of course any number of pipes, as 3, 3, and bottles may be used as desired. I find this method of construction of an apparatus for heating and medicating air to be much more convenient than that formerly used and to accomplish the same purpose.

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

1. In a device for compressing, heating and medicating air, the combination with an air compressor, provided with two chambers, O and E, of means for heating the compressed air within the compressor such as a lamp or gas in the lower chamber, E, with pipes extending from the lower chamber through the upper chamber O, and conveying heat through the compressed air chamber, having a vent 4 and a heat register H and pipes 3, 3 for conducting the heated air from the air chamber, substantially as described, and as and for the purpose set forth.

2. In an apparatus for heating and medicating compressed air, the combined air compressor and heater consisting of a receptacle O for receiving the air from an air pump, having its walls lined with non-heat conducting material, and an opening H provided with a heat register, a gage 2, and having within the receptacle pipes B, B extending from a chamber below the air chamber upward through the air chamber and provided with a vent 4 through the walls of the air chamber, and provided with pipes 3, 3 conveying the heated air from the air chamber into the medicating liquid in the bottles, and the cups D surrounding the opening into the pipes 3, 3, and the shelf S supporting the bottles, substantially as described, and as and for the purpose set forth.

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

WILLIAM S. McLEAN.

Witnesses:
A. H. SWARTHOUT,
FANNIE ROBBINS.