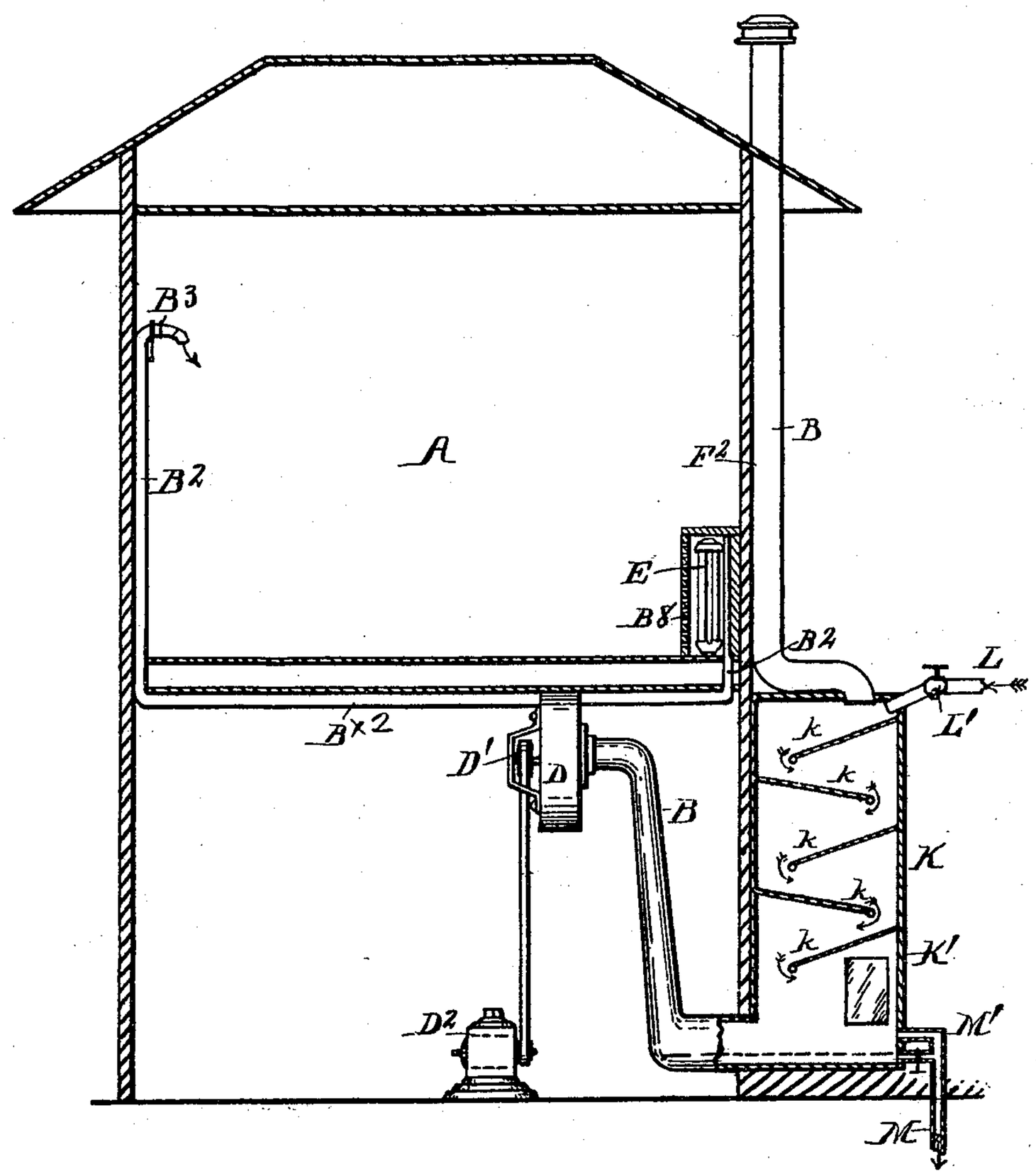
(No Model.)

J. McCREERY.

AIR CLEANING AND COOLING DEVICE.

No. 599,080. Patented Feb. 15, 1898.



WITNESSES

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JOSEPH McCREERY, OF TOLEDO, OHIO.

AIR CLEANING AND COOLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 599,080, dated February 15, 1898.

Application filed May 6, 1895. Serial No. 548,325. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH McCREERY, a citizen of the United States, residing at Toledo, county of Lucas, State of Ohio, have invented certain new and useful Improvements in Systems of Ventilating; 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 drawing, which forms a part of this specification.

This invention relates to an improvement in ventilating, and relates more especially to means for cleansing the air for ventilation.

The invention consists in the construction hereinafter set forth and explained.

The drawing shows a sectional view of a building provided with the apparatus, the latter also being in section.

A represents one or more apartments of a building, vessel, or other analogous structure.

B denotes an induction or inlet pipe for supplying fresh air to said apartments. This pipe is preferably led above the top of the building or other structure, so as to introduce into the building air as pure as possible.

An electric motor D^2 may be employed for operating the pulley D′ of the blower D. From the blower extends the main supply-pipe B^2, having the outlet B^3. If desired, a branch pipe may be led to a radiator E, adjacent to the wall F^2, the air coming out through the openings B^8.

Located in the induction-pipe B is the air-cleansing device K. The position of this device separates the induction-pipe into two parts; but it is described as one pipe for convenience of reference. The cleansing device consists of a case K′, into which the upper part of the pipe B enters, the chamber within the case K′ being provided with a series of shelves or plates *k*, which are preferably inclined. These plates are preferably arranged on opposite sides of the case alternately, the various shelves or plates projecting on a decline toward the opposite wall of the case, the inner edges of the plates overlapping, as shown. These shelves or plates are secured at their sides and upper ends to the case, but not at their lower ends. Into the chamber in the case K′ a water-pipe L is led above the shelves or plates, such pipe being provided with a valve L′. Below the shelves or plates a drain-pipe M leads from the case; also, below the shelves or plates the other part of the pipe B leads from the case K to the blower D. If desired, a second or overflow pipe M′ may be connected with the drain-pipe M.

Water is fed from the pipe L into the chamber within the case *k*′, the water passing from shelf to shelf in its downward passage, while air at the same time is drawn by the blower through the cleansing device, whereby cinders, dust, and other impurities are effectually eliminated, and the air is thus purified. The cleansing device is shown at the lower part of the pipe B; but it may be placed anywhere along the line of the pipe. If desired, ice may be placed in the case K, so that the air may be cooled as well as cleansed.

I am made aware of United States Patent No. 311,298, wherein is shown an apparatus for refrigerating railroad-cars. In this device is shown a compartment provided with two series of pans, the pans of the two series alternating, such pans being perforated. Air and water pass down through the pans, and the former is cooled. In my device the shelves are made solid and inclined. With such construction the water does not pass down through the shelves, but over them, and the inclination of the shelves causes the water to be thrown violently from one shelf to another. With such construction the water is thoroughly agitated and commingling with the air cleanses the latter.

Having thus described my invention, what I claim is—

An air-cleansing case having within it two series of solid shelves placed inclined across the case, the shelves of each series being secured at one end to one side of the case, but not at the other end, the shelves of the two series alternating, in combination with an air-induct pipe, and a water-induct pipe connected with the case above the shelves, and an air-educt pipe, and a water-educt pipe connected with the case below the shelves, as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

JOSEPH McCREERY.

Witnesses:
N. S. WRIGHT,
M. A. MARTIN.