(No Model.)

W. E. MOORE.

VENTILATOR.

No. 281,286. Patented July 17, 1883.

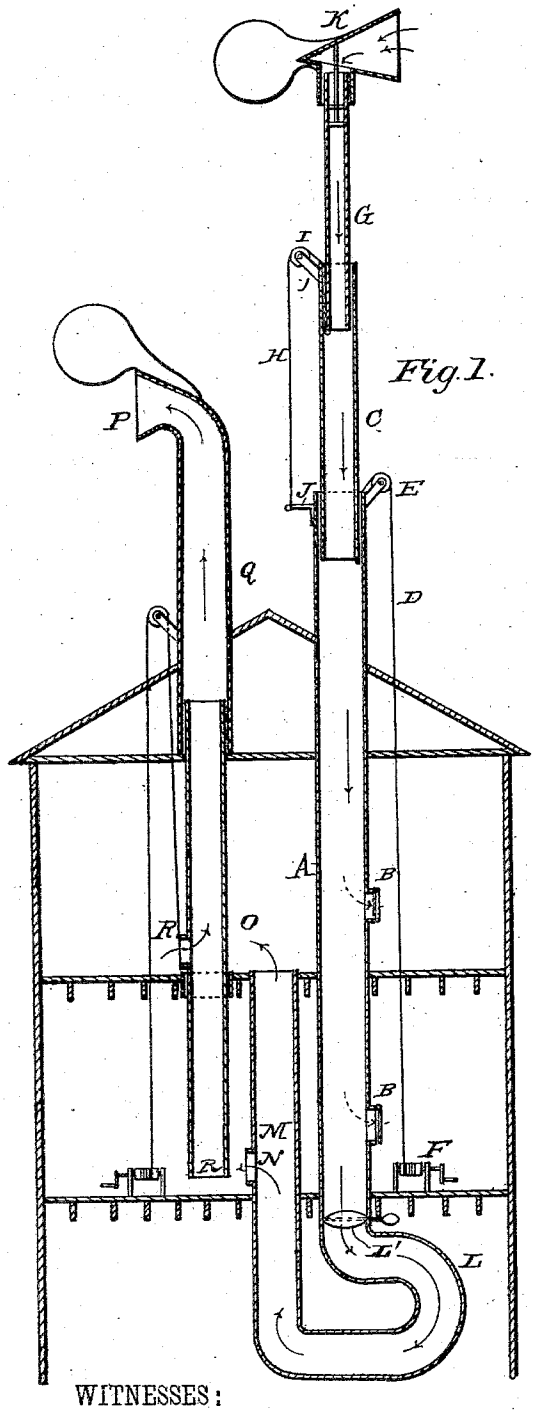


Fig. 1.

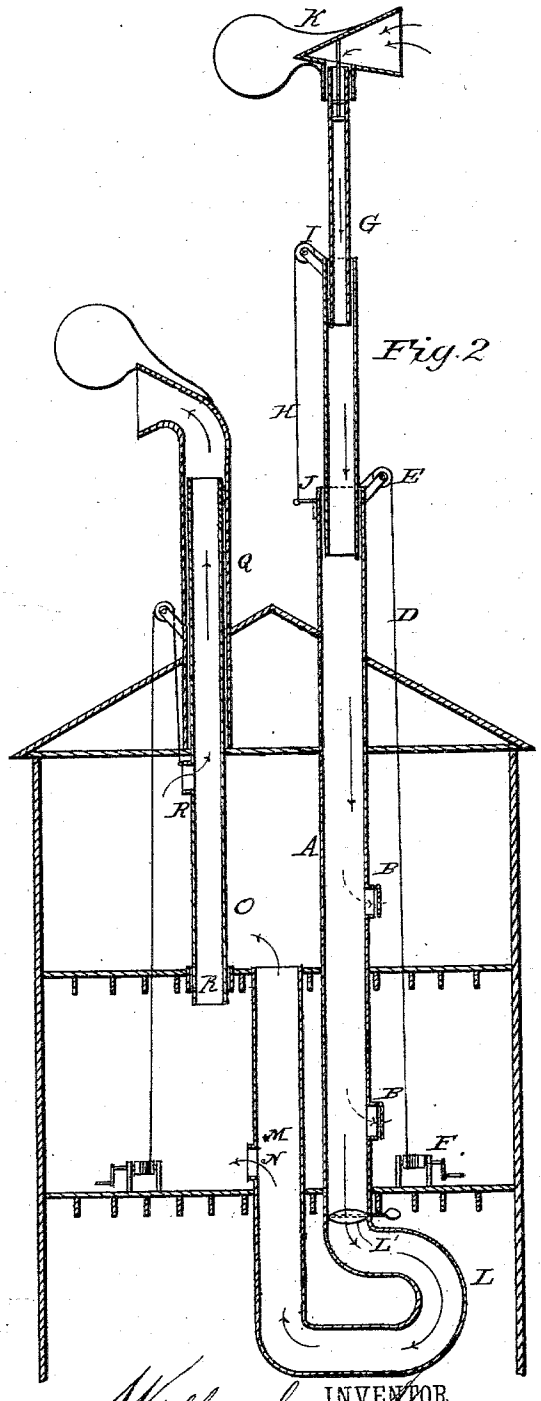


Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIS E. MOORE, OF THORNTOWN, INDIANA.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 281,286, dated July 17, 1883.

Application filed February 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIS EZEKIEL MOORE, of Thorntown, in the county of Boone and State of Indiana, have invented certain new and useful Improvements in Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a sectional view of a building provided with my ventilator, showing the telescopic entrance-pipe lowered and the exit-pipe carrying off the vitiated air near the floor; and Fig. 2 is a similar view, showing the entrance-pipe extended and the exit-pipe carrying the vitiated air off near the ceiling.

Similar letters of reference indicate corresponding parts in both the figures.

My invention has relation to ventilators for buildings; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates a tube which extends from the ground up through and above the roof, and which is provided with suitable openings or branch pipes, B, leading to the several compartments in each story of the house, said openings having suitable arrangements for shutting off the draft of air when desired. A section of pipe, C, slides in the upper part of pipe A and is operated by a cord or chain, D, fastened to its lower end and passing over a pulley, E, upon the upper end of pipe A, down through the house to a suitable windlass, F, by which means it may be raised or lowered, as desired. Another pipe-section, G, slides inside the pipe, and is extended as section C is raised by means of a cord or chain, H, passing over a pulley, I, upon the top of pipe C, and fastened to a projection, J, upon the top of pipe A. The number of these telescoping tubes may be increased as desired, their operation being the same for any number. The upper section of pipe is provided with a cowl, K, operated by a vane in such a manner as to always turn its mouth to the wind. The pipe A is extended below the ground by a curved pipe, L, provided with a stop, L′, and which bends upward again and is extended by another pipe, M, which passes upward through the building, provided with suitable openings and branch pipes, N, which convey the air to the several parts in each story of the building. As the air enters through pipe A it may either be distributed directly through the building through the openings B, or it may be carried through pipes L and M and distributed through the openings N. By passing through the curved pipe L, which may be curved or coiled in any desirable manner a certain distance under the ground, the air is cooled in the summer, when the temperature under ground is comparatively cooler than above ground, while in winter, when the temperature under ground is warmer than that of the atmosphere, the air will be warmed.

To carry the vitiated air away from the building I construct a stationary pipe, Q, reaching from the ceiling of the upper floor up through and above the roof, where it is provided with a cowl, P, operated by a vane, which keeps its mouth or opening away from the wind. Inside this pipe slides another pipe, O, operated by a suitable windlass or other suitable means, which extends through the building and is provided with openings R, one for each story, arranged in such a manner that as the pipe is raised or lowered the openings will be near the ceiling or near the floor of each story, the opening being kept near the floor in cold weather and near the ceiling in warm weather. By this arrangement of tubes the air in a building may be kept in constant circulation and at an even temperature by carrying it under the ground, while by raising the inlet-pipe high in the air pure and healthy air is procured, at the same time securing the pipe against accident in high winds by constructing it so that it may be lowered.

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

1. The combination of an inlet-tube distributing the fresh air, with an outlet-tube adapted to be adjusted to carry off the air from near the ceiling or near the floor in the several stories of the building, substantially as shown and described.

2. The combination of an adjustable inlet-

tube adapted to be raised or lowered above the roof of the building, carried below the ground, and returning up through the building, distributing the air through suitable openings, with an outlet-tube adapted to be adjusted to carry off the vitiated air from near the floor or the ceiling in the several stories of the building.

3. The combination and arrangement of the tube A L M, having openings B and N, tube C, adapted to be raised by means of cord or chain D and windlass F, tube G, having cowl K, and adapted to be raised by cord or chain H, outlet-tube Q, having cowl P, and sliding tube O, havings openings R, and means for operating it, all constructed to operate as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIS EZEKIEL MOORE.

Witnesses:

JOHN EVERETT LA RUE,

WILLIAM HENRY SIMS.