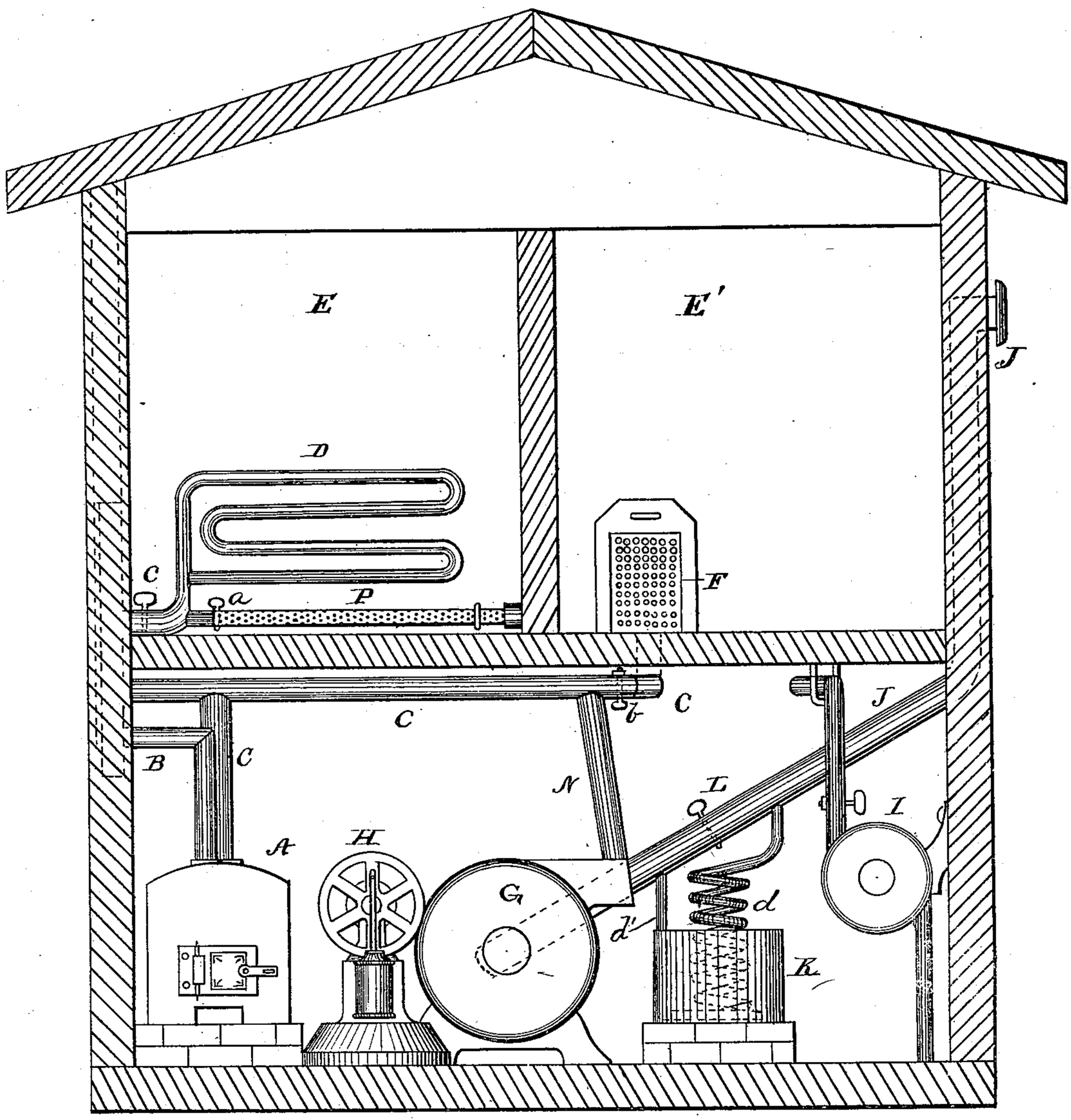
(No Model.)

T. McGRORY.

COOLING AND VENTILATING HOUSES.

No. 253,740. Patented Feb. 14, 1882.



Witnesses.
Edwin L. Yewell.
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Inventor,
Thomas McGrory.
By C. M. Alexander
his Atty.

UNITED STATES PATENT OFFICE.

THOMAS McGRORY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO HOWARD BANES, OF SAME PLACE.

COOLING AND VENTILATING HOUSES.

SPECIFICATION forming part of Letters Patent No. 253,740, dated February 14, 1882.

Application filed August 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MCGRORY, of Philadelphia, in the county of Philadelphia, and in the State of Pennsylvania, have invented certain new and useful Improvements in Ventilators for Houses; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

The object of my invention is mainly to provide certain novel means whereby the steam-pipes or hot-air flues used for conveying steam or hot air to rooms for the purpose of warming them are practically utilized for conveying cool air to the rooms during warm weather.

The following description of my invention, when taken in connecion with the annexed drawing, will enable others skilled in the art to fully understand it.

The annexed drawing represents a vertical section of a building, showing my apparatus applied in the cellar and two apartments above the ground-floor.

A designates an apparatus of any well-known kind adapted for the generating of steam, or, if desired, for heating air; and B is the smoke-flue, which leads off from the furnace of the heater into a chimney.

C designates a pipe for conveying steam to the radiating-pipe D, arranged in the apartment E, and which also communicates with a perforated outlet-plate register, F, located in the apartment E′, which register is designed for the supply of cold air to this apartment. To supply steam to the radiator D, valves *a b* are shut and valve *c* is opened.

G designates a rotary blower, which may be driven by means of a steam-engine, H, or by means of a rotary engine, I, actuated by water-power; or any other prime motor which is found most convenient and economical may be adopted for giving motion to the said blower. The air for supplying the blower G is preferably taken into a pipe, J, from a point at or near the top of the building, which pipe leads down through the building-walls and enters the suction side of the blower.

If it is designed to reduce the air to a very low degree of temperature, I adopt the following contrivance:

K designates a receiver for ice or other refrigerating material, into which dips a worm, *d*, of pipe, one end of which worm-pipe communicates with the air-pipe J above a valve, L, and the other end, *d′*, of the worm-pipe communicates with air-pipe J below the valve L. By closing the valve L all of the air which is drawn into pipe J will pass through the refrigerator.

It will be seen that the temperature of the air can be regulated by opening valve L more or less.

The blower G discharges the cool air into the pipe C through a pipe N, and pipe C conveys the cool air into the apartments E E′, and discharges it equably through the perforated pipe P in apartment E and through the register F in the apartment E′.

The valve *a* at one end of pipe P is opened for admitting cold air into the apartment E, and the valve *b* is opened to allow air to pass through register F into apartment E′.

It will be seen from the above description that I simply combine my air forcing and cooling apparatus with the ordinary steam-heating pipes commonly used in buildings, and add to such pipes certain regulating and cut-off valves.

It is obvious that the air might be purified and filtered by the use of suitable means applied for this purpose.

I do not claim the apparatus nor any part of the apparatus shown and described in the Letters Patent No. 51,236 of November 28, 1865.

I claim as my invention—

1. The combination of the steam-heater, the cooler, the air-inlet pipe L, the forcing-engine, pipes C N, valves *a b c*, radiator D, and the perforated pipe P, substantially as described.

2. The combination of a radiator, D, the perforated pipe P, and valves *a c*, substantially as and for the purpose described.

In testimony whereof I affix my signature, in presence of two witnesses, this 28th day of July, 1881.

THOS. MCGRORY.

Witnesses:
T. J. COYE,
WM. M. MCKNIGHT.