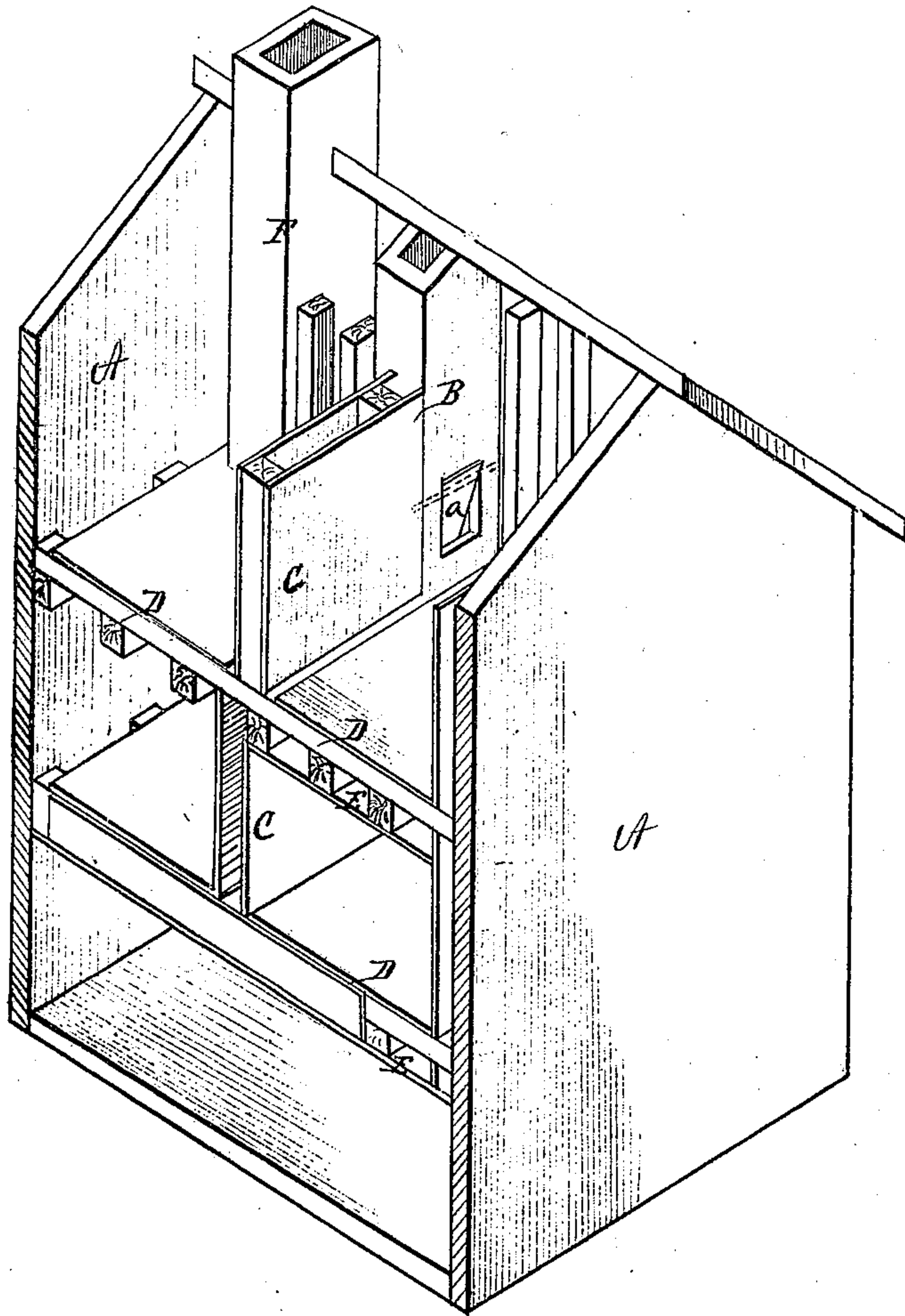


B. R. Hawley,

Ventilator.

No. 98,372.

Patented Dec. 28, 1869.



Witnesses
C. L. Fair
A. A. Yeatman.

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United States Patent Office.

B. R. HAWLEY, OF NORMAL, ILLINOIS.

Letters Patent No. 98,372, dated December 28, 1869.

VENTILATOR

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, B. R. HAWLEY, of Normal, in the county of McLean, and in the State of Illinois, have invented a certain new and useful Improvement in Buildings; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists—

First, in having a hot-air shaft, to be constructed of any material, to receive the heated air from the warmer, and to convey it to the several rooms in the house, and discharge it into the rooms as it may be needed, by means of valves, registers, or transoms.

Second, in making a continuous line of plastering, or other material, to exclude the ingress of air through the outer wall, on the inside of the outside wall from the sill to the plate, for the purpose of cutting off all air from the outside or the attic.

Third, in using the hollow partitions in any house, for the purpose of exhausting the foul air from the rooms of the house, the partitions being open at the top and bottom.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which represent a perspective view of a house, one side and portion of the roof being removed.

I place the warmer in the basement, hall, or other convenient apartment, to which warmer the cold air is admitted by any convenient cold-air duct. When heated, the air is conducted, by one upright shaft, to the different rooms, and discharged into the rooms by means of valves, registers, or transoms. The heated or vitiated air in the rooms, is then forced into the hollow partitions, and from said hollow partitions is conducted to the foul-air shaft, whence it escapes to the open air.

In the annexed drawings—

A represents the walls of a house.

B is the hot-air shaft, beneath which is the warmer or furnace, warming the air conducted to it in any of the known and usual ways.

Thence, the hot air rises in the hot-air shaft or shafts B, (which shaft or shafts may be built in the partitions or otherwise, as may be desired,) from whence it passes

where it is needed, by means of the valves or dampers *a*. These throw it into the room where needed, and in the quantity desired, or shut it out entirely from a room or story. Thence it rises to the roof, and the air that has been in the room passes out near the bottom, between the partitions C C, and between the floor D and ceiling E, which are so constructed as to admit of a free circulation to the base of the chimney or foul-air shaft F, which foul-air shaft may be connected with the chimney or not, as is desired. It is generally so connected, because the air is rarefied by the heat of the chimney, or the hot air and smoke of the chimney.

The inner surface of the outer walls should be plastered, or provided with other suitable material, and continuous and unbroken, so as to make the house, as near as possible, air-tight within the inner surface of the outer walls.

The space or chamber thus formed between the inner and outer walls, rendered air-tight from the outside by the plastering, is connected by suitable apertures with the room, as well as with the hot-air and foul-air shafts, and also by suitable apertures with the space or chamber formed in the floor and ceiling, causing a perfect circulation of the air throughout the whole house.

The plastering mentioned extends also between the floor and ceilings, so as to exclude the cold air from the attic and basement.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the devices herein described, for ventilating and heating buildings, consisting of the hot-air shaft B, provided with dampers *a a*, the foul-air shaft F, and the space or chamber formed between the inner and outer walls, and in the floor and ceiling, said space or chamber being rendered air-tight from the outside by a continuous line of plastering or other equivalent, on the inside of the outside walls, substantially as set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 1st day of September, 1869.

B. R. HAWLEY.

Witnesses:

THOS. SLADE,
W. M. HATCH.