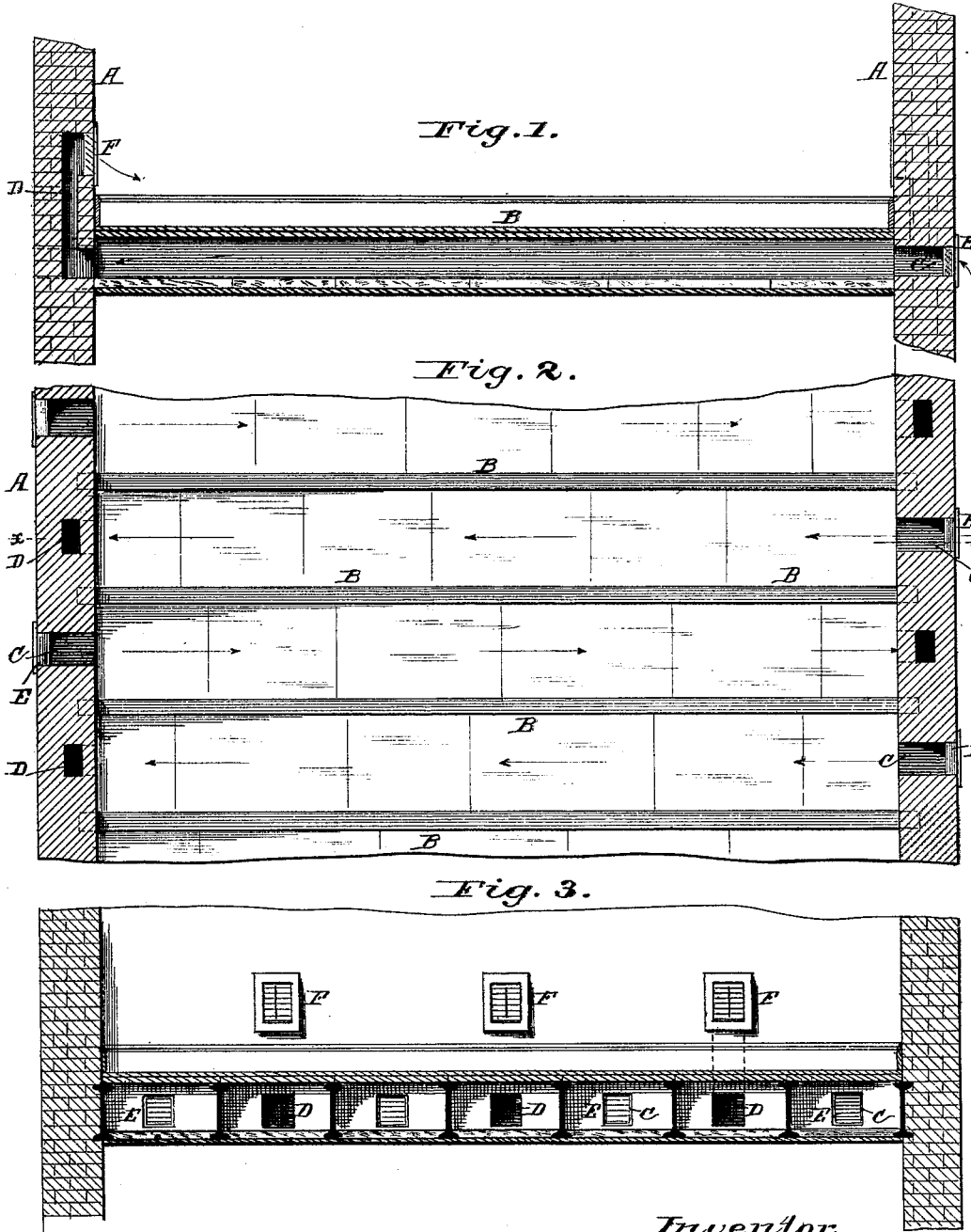


M. A. BURNHAM.  
VENTILATING BUILDINGS.

No. 180,841.

Patented Aug. 8, 1876.



Attest:  
J. S. Peckham,  
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Inventor:  
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By James L. Norris,  
Atty.

# UNITED STATES PATENT OFFICE.

MANLY A. BURNHAM, OF NEW YORK, N. Y.

## IMPROVEMENT IN VENTILATING BUILDINGS.

Specification forming part of Letters Patent No. **180,841**, dated August 8, 1876; application filed July 8, 1876.

*To all whom it may concern:*

Be it known that I, MANLY A. BURNHAM, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Ventilating Buildings, of which the following is a specification:

This invention relates to certain improvements in the ventilation of buildings, its object being to provide a continuous supply of fresh air to and through the rooms, and at the same time to avoid direct drafts through the same.

My invention consists in conducting the external air into the rooms of a building, and discharging the foul air through the spaces between the girders or beams which support the flooring, taking it in at one end through an opening in the walls of the building, and discharging it at the opposite end into the room through a suitable opening, the spaces being arranged to alternately communicate on opposite sides with the external air and the interior of the room or building, as more fully hereinafter set forth.

In the drawing, Figure 1 is a sectional view of a floor and ceiling constructed according to my invention; and Figs. 2 and 3 are similar views, looking in different directions.

In the drawing, the letter A represents the walls of a building of any suitable construction, and B the girders which support the flooring and ceiling. These may be constructed, in the ordinary manner, of wood, metal, or other material, and laid parallel with each other at suitable distances apart. The spaces between these girders are made to communicate alternately on opposite sides of the building, at one end, with the external air by means of suitable openings C, and at the other with the flues D, leading into the room above. The openings C are preferably covered by a grating or netting, E, of suitable material, to prevent the ingress of dust, and the openings of the flues D with registers F, by means of which the quantity of air admitted to the room may be regulated and controlled.

In operation, when the wind is blowing from the direction indicated, it enters the openings

on one side of the building, and, after passing through the spaces between the girders connected therewith, escapes into the room, the foul air passing out through the alternate series, and vice versa.

It will be perceived that by the above system of ventilation provision is made for the admission of air from opposite sides of the building, so as to take advantage of opposite currents of air, thus providing for a perfect circulation of the air at all times, and that the air is introduced near the floor and ceiling in such manner as to avoid all direct drafts, and supply the room regularly and uniformly with fresh air as pure as the external atmosphere.

When the buildings are located in blocks and the girders are laid at right angles to the front and rear of the same, the flues between the floors are formed by means of tubes passing through the girders, and so provide for the more thorough distribution of the air throughout the room. The flues in the walls leading from the flues between the floor and ceiling may be extended to the top of the rooms, and open at that point as well as at the bottom.

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

1. The spaces or flues B', between the girders of the building, opening at one end to the external air, and at the other into the room above, for the purpose of conducting fresh air into the room, substantially as described.

2. In combination with the spaces or flues between the girders which support the flooring and ceilings of a building, the apertures communicating alternately on opposite sides with the external air, and the flues or apertures opening into the rooms of the building, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

MANLY A. BURNHAM.

Witnesses:

JOS. L. COOMBS,  
JAMES L. NORRIS.