G. W. BLAKE.

AIR-BOXES FOR RADIATORS.

No. 190,950. Patented May 22, 1877.

Fig. 1.

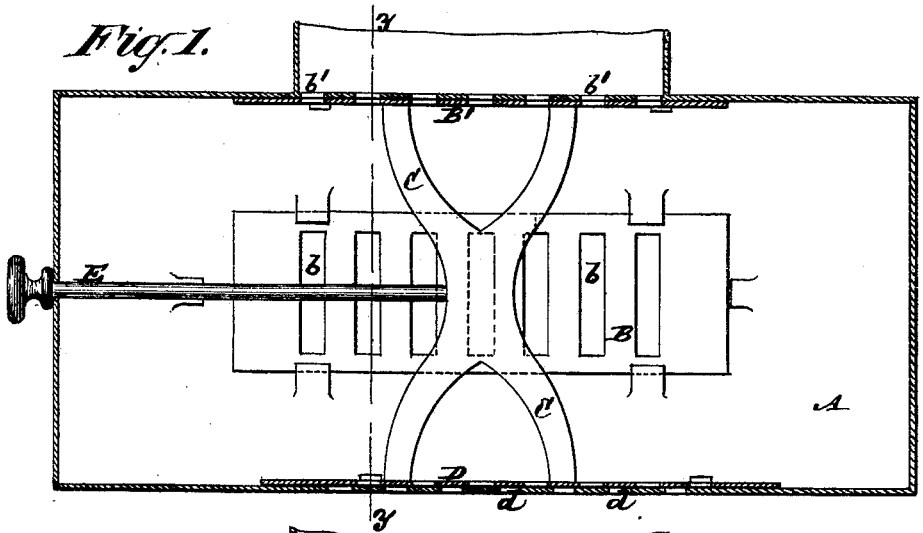


Fig. 2.

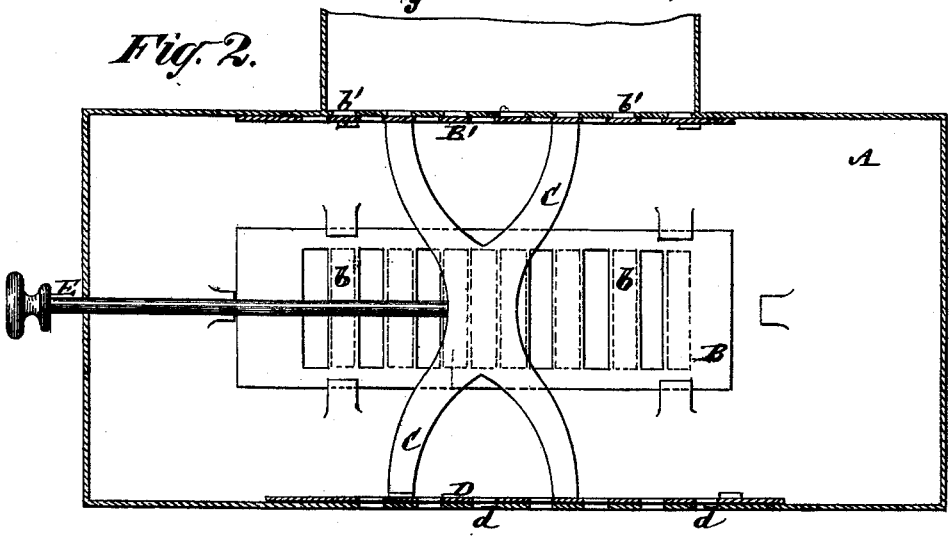
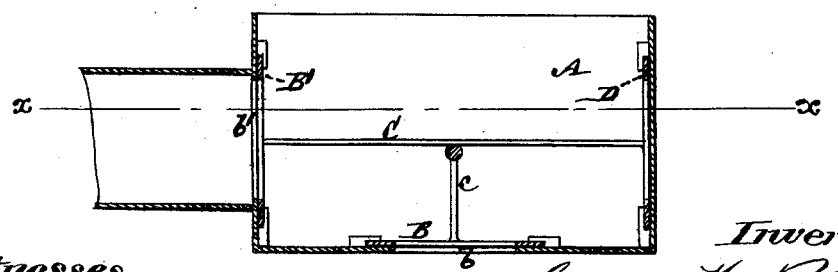


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE W. BLAKE, OF NEW YORK, N. Y.

IMPROVEMENT IN AIR-BOXES FOR RADIATORS.

Specification forming part of Letters Patent No. **190,950**, dated May 22, 1877; application filed September 7, 1876.

To all whom it may concern:

Be it known that I, GEORGE W. BLAKE, of the city, county, and State of New York, have invented certain new and useful Improvements in Air-Boxes for Radiators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention relates to air-supply boxes or bases of steam or other radiators for heating apartments in part, or wholly, by currents of air disposed to circulate within and through the radiator.

The invention consists in a novel combination, with the air-box of the radiator, of duplicate valves for controlling communication with the external atmosphere, and a connected valve for controlling communication with the air of the apartment, whereby the same air-box is applicable to different arrangements of the radiator in the apartment, and to different constructions of the latter, or of the building, as regards the supply of air from the outside of the apartment or building.

Figures 1 and 2 represent similar horizontal sections on the line *x x* of an air-box of a radiator with registers or valves in accordance with my invention, but showing the valves in different positions. Fig. 3 is a vertical transverse section of the same on the line *y y*.

A is the air box or base, on or within which the radiator rests, said radiator being of any suitable construction to provide for the circulation of air to be heated through it.

In the bottom, and in the one side of this box, are air-inlets *b b'*, in communication with the external atmosphere, and controlled by connected slides, valves, or registers B B'. Either or both of these registers may be used; but the object of furnishing the air-box with the two is to adapt the same box to receive the external atmosphere either through its side or through its bottom, according to the disposition of the radiator in the apartment, or the peculiar construction of the apartment or building as regards the convenient connection of the air-box with the outside atmosphere. A yoke, C, having an arm or elbow, *c*, serves to connect these two registers. The side register B' may be disconnected when the external atmosphere is received exclusively through the bottom register B; but when there is no provision for receiving external air through the bottom of the air-box, then it is immaterial whether the bottom register B be disconnected or not.

On the other side of the air-box A to that on which the register B' is arranged is a register, D, arranged to control openings *d*, which establish communication with the air in the apartment. This register is also connected, by the yoke C, with the registers B B', or either of them, and is set or arranged to work in inverse relation with the registers B B'—that is to say, when opened, the registers B B' are closed, and vice versa.

A rod or handle, E, attached to the yoke C, and arranged for operation from the exterior of the air-box, serves to simultaneously actuate the several registers.

By connection of the valves which control communication of the air-box with the outside atmosphere, and with the air in the apartment, a single manipulation serves to operate both, and when the supply of air is shut off from the exterior of the building, the supply of air from within the apartment is established, and vice versa, so that the radiator is always supplied with air from one source or the other, and it may be from both the outside and inside of the apartment by only partially closing the valves controlling both sources of supply.

I claim—

The combination, with the air-supply box A, the valve D, and duplicate valves B B', connected by the yoke C and elbow *c*, said valve and duplicate valves being arranged to operate simultaneously and control respectively, and in inverse relation with each other, as regards their opening and closing actions, communication with the external air and air of the compartment, substantially as described.

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Witnesses:

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