2 Sheets—Sheet 1.

I. BALES.

Combined House Ventilator and Register.

No. 232,166. **Patented Sept. 14, 1880.**

Fig. 1.

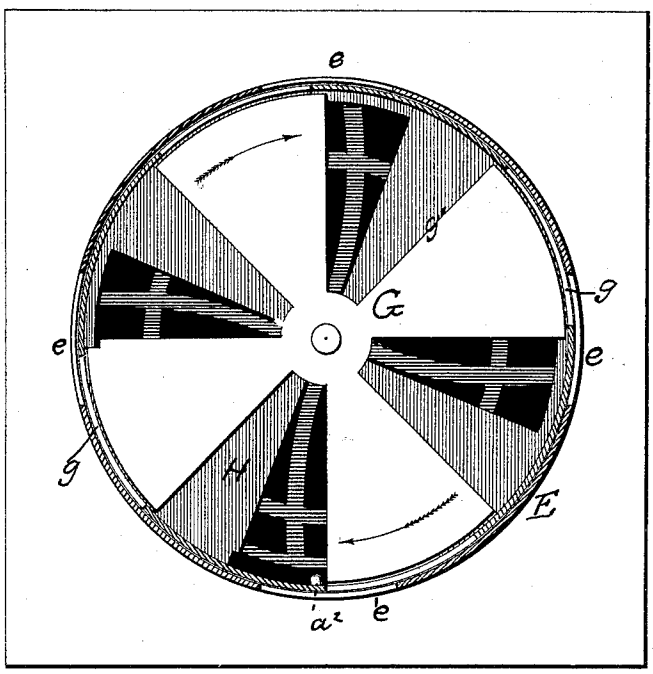
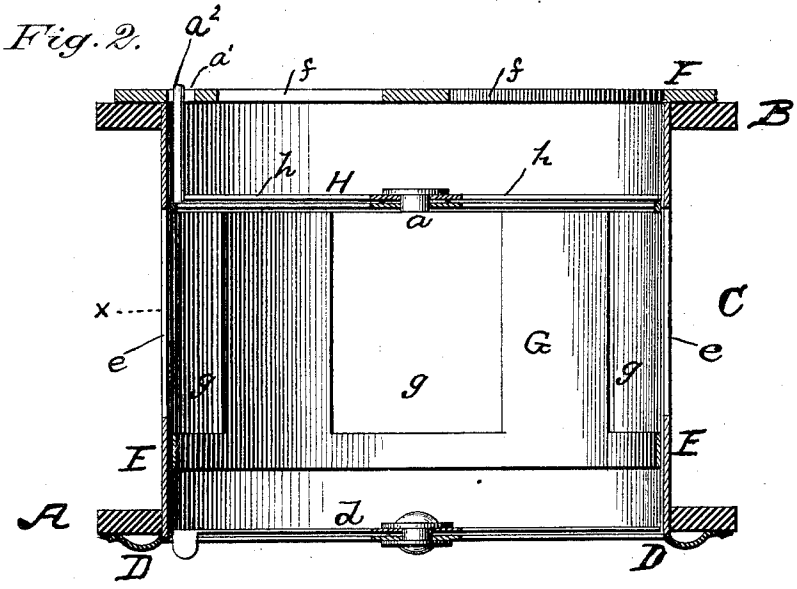


Fig. 2.



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2 Sheets—Sheet 2.

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Combined House Ventilator and Register.

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Fig. 3.

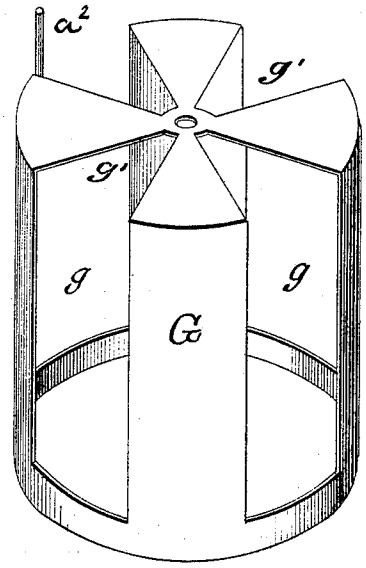
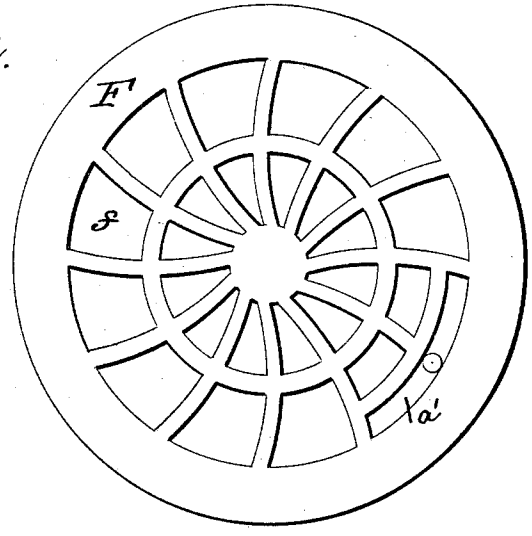


Fig. 4.



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UNITED STATES PATENT OFFICE.

ISAAC BALES, OF HICKSVILLE, OHIO.

COMBINED HOUSE VENTILATOR AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 232,166, dated September 14, 1880.

Application filed December 3, 1879.

To all whom it may concern:

Be it known that I, ISAAC BALES, a citizen of the United States, residing at Hicksville, in the county of Defiance and State of Ohio, have invented certain new and useful Improvements in a Combined House Ventilator and Register; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of inventions known as "combined house ventilators and registers;" and it consists in the novel construction and arrangement of the several parts, which will be hereinafter more fully described.

Figure 1 represents a cross-section of my improved ventilator and register, taken in line *x x*. Fig. 2 represents a vertical sectional view of the same. Figs. 3 and 4 represent detail views.

A represents the ceiling of a room, and B indicates the floor above, between which is the space C.

E represents the casing or cylinder, placed in the space C, between the ceiling A and the floor B, and provided with open spaces *e*. Said casing E has at its lower end a suitable registering disk, D, which is provided with a revolving or registering disk, *d*, that registers therewith; and at the upper portion of said casing, and above the floor B, is a grated plate, F, having openings *f*.

G represents a cylinder, somewhat smaller in size than the cylinder E, and placed within said cylinder, and provided with openings *g*, corresponding in size to the openings *e* in said casing. Said cylinder G is constructed in such a manner as to allow the same to be bottomless, and at the upper portion thereof the same is made in the shape of a registering disk, and has extending therefrom vertically a pin or rod, a^2, that passes up through a slot, a', in the plate F, aforesaid.

The cylinder G above mentioned is pivoted at *a* in the center of a registering plate, H, that has openings *h*, to correspond to the spaces g' in the upper portion of the cylinder G.

Having thus fully described the different parts of which my ventilator and register is constructed, I will now proceed to give the manner in which the same is operated.

When it is desired to draw the heat from a room below to the upper room above, the register *d* is opened and the cylinder G is revolved upon the pivot *a* by means of the pin or rod a^2. This movement has the effect of closing the openings *e* in the cylinder E, by means of the solid portion between the spaces $g\ g'$ of the cylinder G coming in contact with said openings *e*, thereby closing the same at the same time.

The open spaces g' in the upper portion of the cylinder G register with corresponding spaces *h* in the plate H, hereinbefore mentioned.

By this arrangement of the parts the heat is allowed to escape from the lower room through the casing E, and out through spaces *f* in the plate F.

To shut off the heat the register *h* is closed by means of the rod a^2, and the register *d* is also closed.

To ventilate the room below, the register *d* should be opened and the cylinder G revolved to allow the openings or spaces *g e* to register one with the other. By this movement of said cylinder the register *h* is closed, thus allowing all the foul or impure air arising from the room below to enter the casing E through the register *d* and out the side openings, *e*, in the casing E aforesaid, thus entering the space C, between the ceiling A and the floor B, and at the same time preventing any impure air from entering the room above.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a register for heating and ventilating purposes, the cylinder G, constructed as described, having registering openings $g\ g'$, pivoted at *a* to the plate H, and provided with similar openings *h*, operated by means of the rod or pin a^2 in the manner shown, in combination with the casing E, having registering openings *e*, and register *d*, the whole constructed and operating in the manner shown and described, and for the purposes specified.

ISAAC BALES.

Witnesses:
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