G. YON.

VENTILATOR.

No. 189,006. Patented March 27, 1877.

Fig. 1.

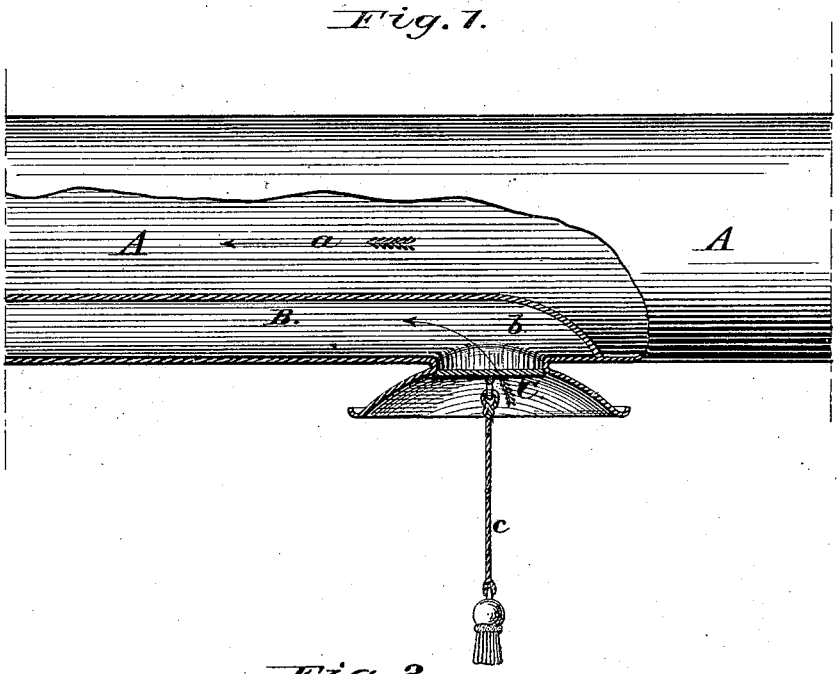
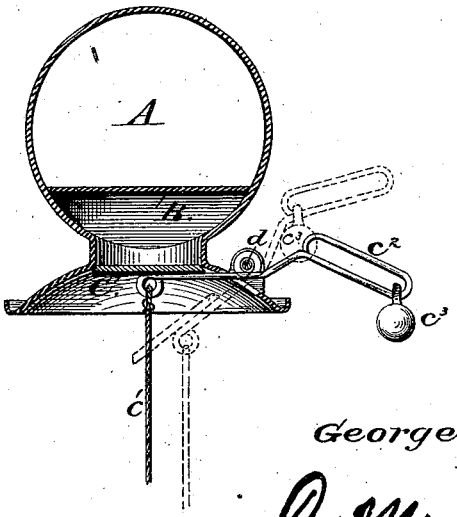


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE YON, OF MONTREAL, QUEBEC, CANADA.

IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. **189,006**, dated March 27, 1877; application filed October 6, 1876.

To all whom it may concern:

Be it known that I, GEORGE YON, of the city of Montreal, Province of Quebec, Dominion of Canada, have invented new and useful Improvements in Ventilators for Buildings, Rooms, Furnaces, Stoves, &c.; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which the same letters refer to corresponding parts.

The first part of my invention consists in introducing into a stove, or furnace-pipe, or a chimney-flue, or air-duct, a ventilating-tube of any desired dimension or shape, communicating from the portion of a building to be ventilated to such stove-pipe, flue, duct, &c., and so prolonged into the same in the direction of the outward current as not only to cause no eddy or obstruction to the flow of air or smoke, but rather to help the draft.

The second part of my improvement consists in combining, with the above arrangement, a valve or damper furnished with a shifting counter-weight, so constructed that it will keep itself open or shut by merely pulling or raising the cord attached to it.

I know that the principle of conducting two currents required to travel in the same pipe or flue, so that they may not obstruct or impede each other by meeting at right angle, is a self-evident and well-known principle; but I am not aware that it has ever been practically applied for the ventilation of dwellings or workshops; and I therefore base my claim upon that improvement, combined with my valve or damper.

Figure 1 is a longitudinal section of the ventilator, showing how it is introduced into the stove-pipe, chimney, or ventilating-flue running in walls or between floors. Fig. 2 is an end view of the same, showing the valve which opens or closes the ventilator and its shifting counter-weight.

A is the stove-pipe, chimney-flue, or air-duct in which the ventilator is inserted. The arrow *a* shows the direction which the air or smoke takes in its course to the exterior atmosphere. B is the ventilator, with its prolongation into the stove-pipe or flue in the direction of the natural current created in the latter by difference of temperature, or induced by outside winds. The current in the pipe or flue is not, therefore, impeded, but is rather increased, by the air rushing into it from the ventilator in the direction of the arrrow *b*. The mouth of this ventilator may be of any suitable shape, and may be extended to the form of a hood when placed over cooking stoves or ranges, to carry off the fumes from the cooking utensils, or the overheated air around them.

C is a valve, placed at the end of a lever hinged at its center, or nearly so, and carrying at its other end a slotted arm, on which is suspended the shifting counter-weight c^3, which keeps it, at will, closed or open. c^1 is a cord with tassel of such weight as to counterbalance the weight c^3.

When the cord is raised the counter-weight shifts to the end of the lever, and holds the valve closed. To open the valve the cord is pulled, and, by its weight, it keeps it in that position, as the counter-weight, shifting toward the fulcrum of the lever, as shown by the dotted lines, ceases to counterbalance the valve and cord.

What I claim as my invention is—

1. The damper or valve C, hinged at *d* by means of a slotted lever, c^2, in combination with the counter-weight c^3, and cord and weighted tassel c^1, as and for the purpose substantially as described.

2. The combination of the pipe or flue A, provided with the prolongation B, with the counterbalanced automatic valve or damper C, substantially as and for the purpose described.

GEORGE YON.

Witnesses:
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