(No Model.)

F. E. SMITH.

WINDOW VENTILATOR.

No. 364,734. Patented June 14, 1887.

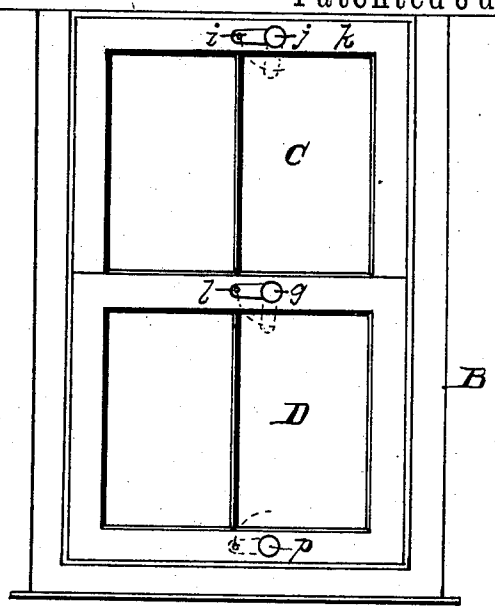


Fig. 1.

Fig. 2.

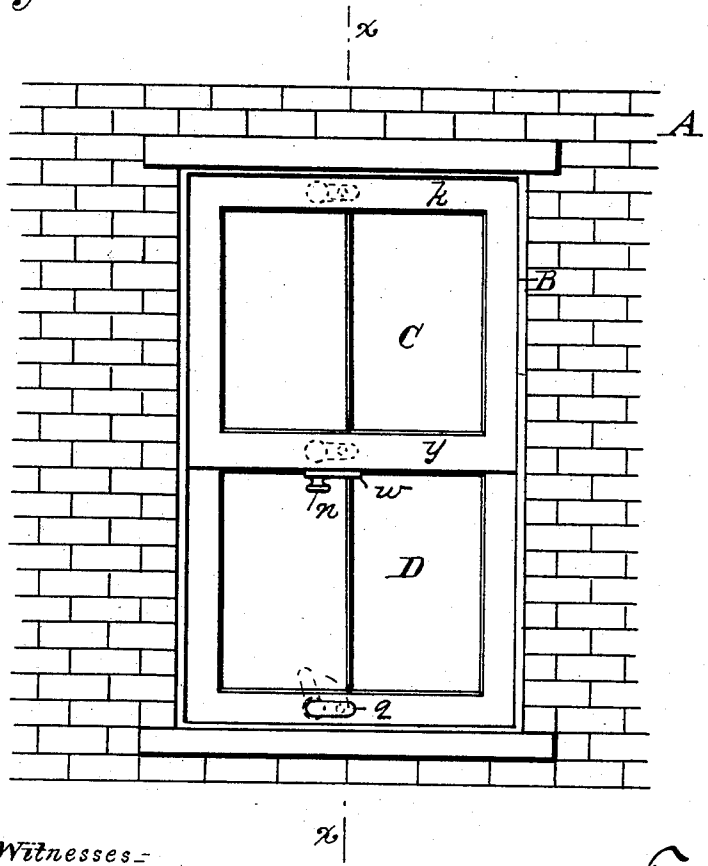
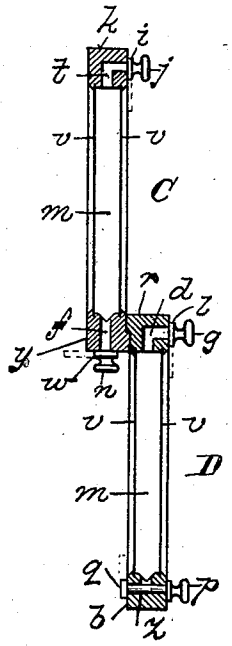


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK E. SMITH, OF BOSTON, MASSACHUSETTS.

WINDOW-VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 364,734, dated June 14, 1887.

Application filed March 23, 1887. Serial No. 232,077. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK E. SMITH, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Window-Sashes, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved sash as viewed from the inner side of the building, the vent and drain openings being represented as closed; Fig. 2, a side elevation of the same as viewed from the outer side of the building; and Fig. 3, a vertical longitudinal section of the sash, taken on line *x x* in Fig. 2.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention is designed to obviate the necessity of using outside or double windows to assist in keeping a room or building warm in cold weather; and it consists in a novel construction and arrangement of parts, as hereinafter more fully set forth and claimed, by which a more effective and otherwise desirable device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the wall of the building, B the window frame or case, C the upper and D the lower sash.

The rails and stiles of each sash are made somewhat thicker than usual, and each sash is double-glazed, an air space or chamber, *m*, being left between the panes *v v*.

The top rail, *k*, of the upper sash is provided with a flue, *t*, which leads upwardly from the chamber *m* and opens on the inner side of the window, the meeting-rail *r* of the lower sash being provided with a corresponding flue, *d*. The meeting-rail *y* of the upper sash is provided with a vertical flue, *f*, which leads from the chamber *m* and opens on the outer side of the window, the bottom rail, *b*, of the lower sash being provided with a flue, *z*, which leads from the chamber *m* and also opens on the outer side of the window.

A plate, *i*, is pivoted to the rail *k* of the upper sash, near the flue *t*, and provided with a knob, *j*, by which it may be turned to close the outer end of said flue, a plate, *l*, being pivoted in like manner to the rail *r* of the lower sash and provided with a knob, *g*, for closing the flue *d*. A plate, *w*, is pivoted to the rail *y* of the upper sash, near the flue *f*, and provided with a knob, *n*, by which it may be turned to close the outer end of said flue. A rod (not shown) having a knob, *p*, at its inner end and provided with a plate, *q*, at its outer end, is journaled horizontally, near the flue *z*, in the rail *b* of the lower sash, said rod being adapted to be turned by its knob and move the plate into position to cover the outer end of said flue.

It will be obvious that the flues are adapted to serve as ventilators for the room, which may be ventilated thereby without raising the lower or lowering the upper sash; also, that a door may be constructed on the same principle. The flues *z f* also respectively subserve as ducts for draining the chambers *m*, or carrying off any water that may accumulate therein from condensation or otherwise. It will also be obvious that the use of double panes *v* in each sash renders it unnecessary to employ double or "storm" windows to keep out the cold.

Having thus explained my invention, what I claim is—

1. The sash C, having the panes *v v*, arranged to form the air-chamber *m*, the top rail, *k*, of said sash being provided with the inwardly-opening flue *t* and pivoted plate *i*, and the meeting-rail *y*, with the outwardly-opening flue *f* and pivoted plate *w*, substantially as set forth.

2. The sash D, having the panes *v v*, arranged to form the air-chamber *m*, the meeting-rail *r* of said sash being provided with the flue *d* and pivoted plate *l*, and the lower rail, *b*, with the flue *z*, knob *p*, plate *q*, and a rod journaled horizontally in the rail *b*, to which said plate and knob are attached, the knob being disposed at the inner and the plate at the outer side of the sash, and the plate adapted to close said flue, substantially as described.

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