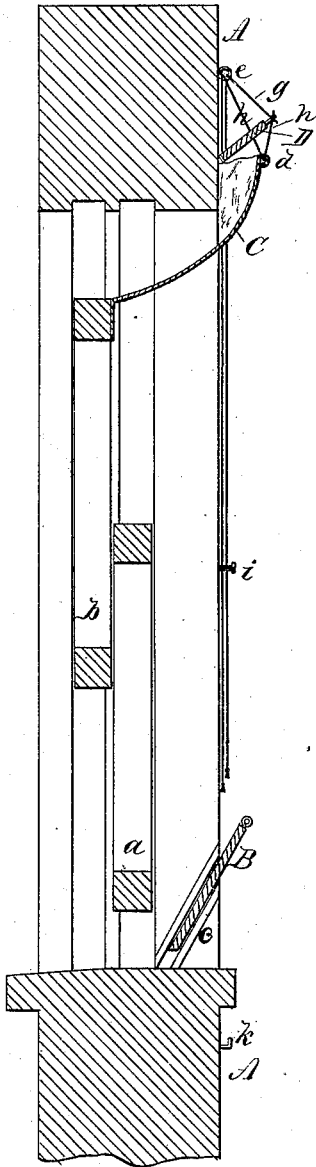
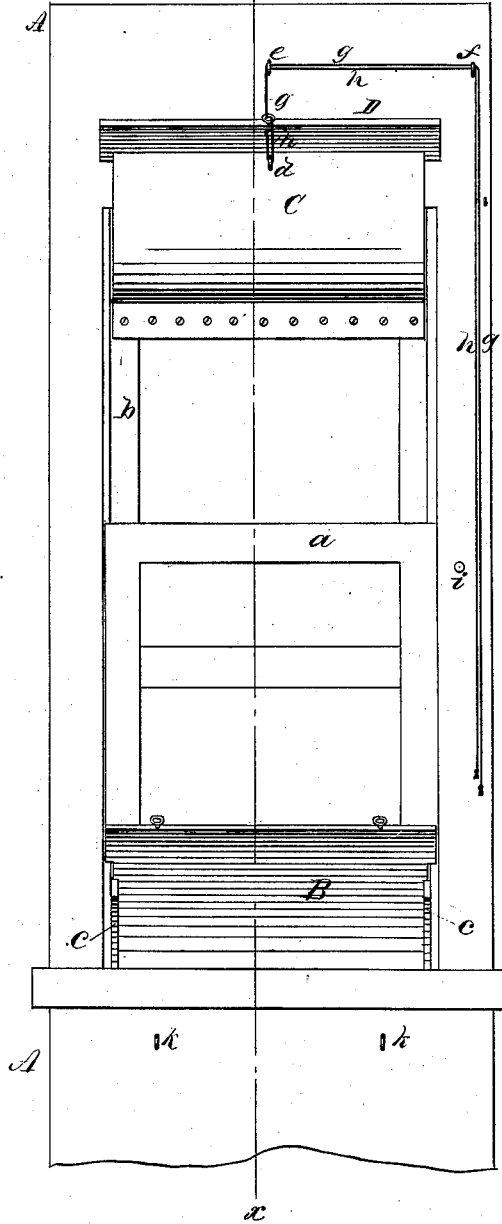


L. D. HARVEY.
Ventilators for Windows.

No. 199,438.
Fig. 1.



Patented Jan. 22, 1878.
Fig. 2. x



WITNESSES:

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UNITED STATES PATENT OFFICE.

LORENZO D. HARVEY, OF SHEBOYGAN, WISCONSIN.

IMPROVEMENT IN VENTILATORS FOR WINDOWS.

Specification forming part of Letters Patent No. **199,438**, dated January 22, 1878; application filed July 9, 1877.

To all whom it may concern:

Be it known that I, LORENZO DOW HARVEY, of Sheboygan, county of Sheboygan, and State of Wisconsin, have invented a new and Improved Ventilator, of which the following is a specification:

Figure 1 is a vertical section on line *x x* in Fig. 2. Fig. 2 is a front elevation.

My invention relates to ventilators that are applied to windows; and it consists of a deflector fitted to slides in the lower part of the window-casing in an inclined position.

It also consists of a sheet-metal deflector that is attached to the upper rail of the upper sash, and is curved around the window-casing, extending upward toward the ceiling, said deflector being provided with a cover that is hinged to the window-casing, and provided with cords, by means of which it may be opened or closed.

In the drawing, A is an ordinary window-frame, containing the sash *a b*; and B is a deflector, consisting of a board that is fitted to inclined grooved pieces *c*, that are attached to the jambs of the window. The deflector is also fitted to the moldings of the window-casing and to the window-sill.

When the lower window-sash is raised the rushing air is deflected and passes upward, and is mingled with the warmer air of the room, and tempered before it comes into contact with persons in the room.

When the deflector is not in use, or when it is desired to clean the window, it is drawn out of the grooved pieces *c* and hung upon pins *k*.

At the upper portion of the window a deflector, C, of sheet metal or other flexible material, is attached to the upper rail of the upper sash, and is curved around the upper portion of the

window-frame, and upward toward the ceiling of the room, and is secured to the window-casing by screws, with blocks intervening, forming a passage for air. Cloth is attached to the side of the deflector and to the window-frame, to prevent the air from issuing laterally; and a cover, D, is hinged to the window-casing, which is capable of closing the space between the deflector and the casing.

An eye, *d*, projects from the front of the deflector, and eyes *e f* project from the window-casing. To the outer edge of the cover D two cords, *g h*, are attached. The cord *g* extends upward, and passes through the eyes *e f*, and hangs down at the side of the window. By drawing the cord *g* the cover is raised; by loosening it the cover is lowered. By means of the cord *h* the cover is fastened in any position in which it may be placed, so that it cannot be blown open by the wind. Both cords are fastened by winding them on the knob *i*.

Air entering at the top of the window is directed upward toward the ceiling, and is mingled with the warm air of the room, as in the other case.

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

The curved metallic deflector C, having cloth side pieces, and provided with a hinged cover, D, in combination with the frame and upper sash of a window, substantially as shown and described.

LORENZO DOW HARVEY.

Witnesses:

WM. H. SEAMAN,
JOHN L. BERTSCHY.