(No Model.)

E. C. ELLIS.

WINDOW VENTILATOR.

No. 516,860. Patented Mar. 20, 1894.

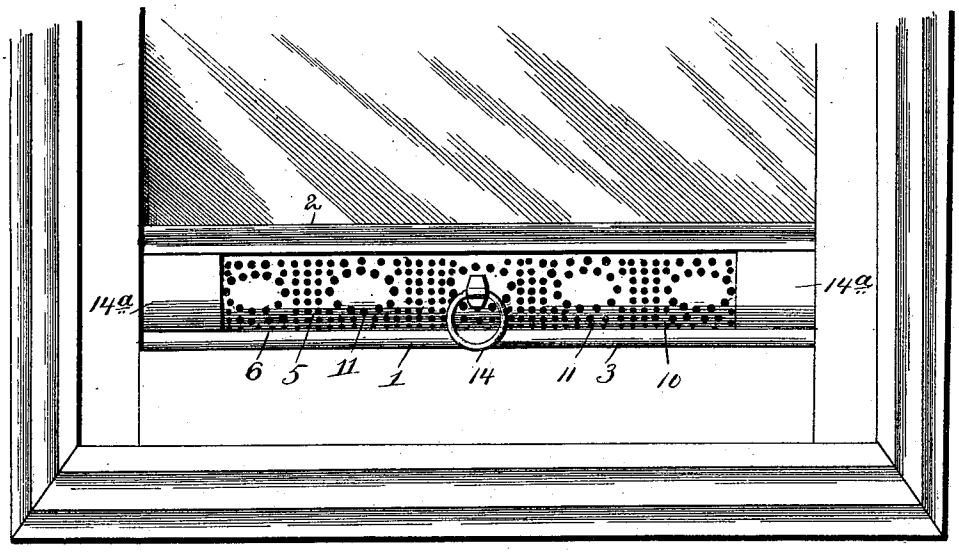

Fig. 1.

Fig. 2.

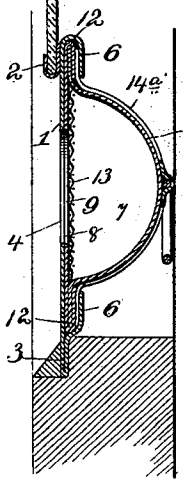

Fig. 3.

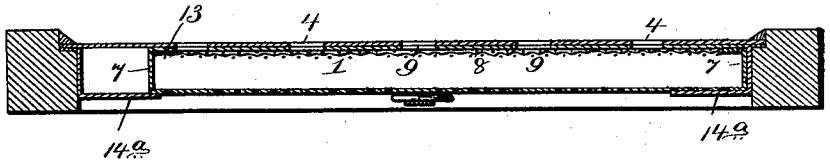

Fig. 4.

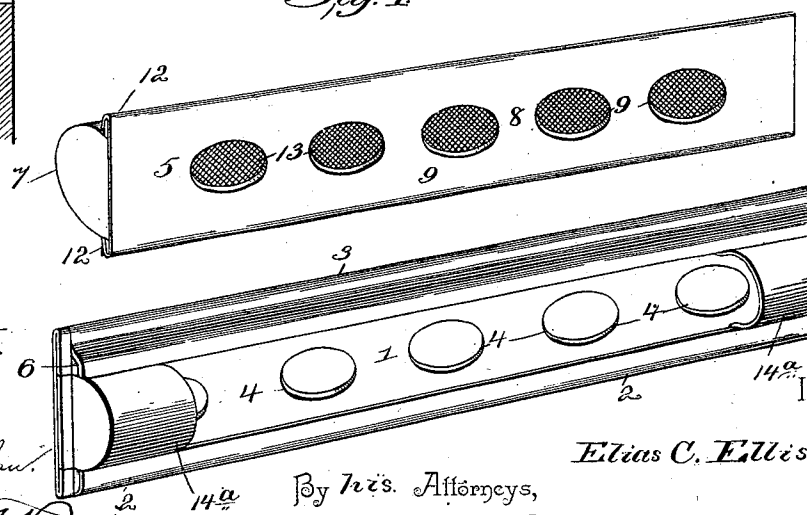

Fig. 5.

Witnesses

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WINDOW-VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 516,860, dated March 20, 1894.

Application filed February 24, 1893. Serial No. 463,549. (No model.)

To all whom it may concern:

Be it known that I, ELIAS C. ELLIS, a citizen of the United States, residing at Colorado Springs, in the county of El Paso and State of Colorado, have invented a new and useful Window-Ventilator, of which the following is a specification.

The invention relates to improvements in ventilators.

The object of the present invention is to provide a simple and inexpensive window ventilator adapted to produce a gentle and constant change of air without draft.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

In the drawings—Figure 1 is an elevation of a portion of a window provided with a ventilator embodying the invention. Fig. 2 is a sectional view taken transversely of the ventilator. Fig. 3 is a longitudinal sectional view of the ventilator. Fig. 4 is a detail perspective view of the ventilator casing detached. Fig. 5 is a similar view of the guiding frame or plate.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a guiding plate provided at its upper edge with a groove 2 adapted to receive the edge of a pane of glass, and provided at its lower edge with a flange 3 adapted to be secured by putty to a sash similar to an ordinary pane of glass. The groove 2 is formed by a strip of metal secured to the back of the casing and bent on itself; and the flange 3 is of substantially the same thickness as a pane of glass. The guiding frame 1 is provided with a series of openings 4 and has longitudinal ways 6, arranged at the edges of the frame and receiving a sliding ventilator casing 5. The ends of the frame are provided with semi-cylindrical caps 7 which receive the ends of the ventilator casing, and one of the caps is adjustable.

The ventilator casing is semi-cylindrical and consists of a back plate 8 provided with openings 9 similar to the openings 4 of the guiding frame, and a semi-cylindrical perforated front 10 having a series of transversely disposed imperforate portions 11 disposed opposite the openings 9 to prevent a straight draft through the ventilator casing in event of a strong wind or draft to prevent any draft into a room. The longitudinal edges of the back plate 8 are bent on themselves to form flanges 12 and to receive the longitudinal edges of the perforated semi-cylindrical front; and in assembling the parts of the ventilator the ways of the frame are left open at one end thereof to permit the casing to be inserted, and after the latter has been arranged on the frame the end cap for the open end of the ways is adjusted in position, and is secured to the frame thereby closing the ways. The openings 9, which are adapted to register with the openings 4 to permit access of air from the outside to the interior of the room, are covered with metallic gauze 13, which keeps out dirt and insects and breaks the force of violent winds; and these holes establish a free communication between the outside air and the interior of the ventilator casing. At times when a strong wind blows directly into the large holes of the frame, there might be a current forced through them directly across the ventilator chamber sufficiently powerful to go through the perforations of the convex front without entirely losing its direction, and this would produce a draft were it not for the convex imperforate portions of the front which obviate any such possibility. The rapidity of movement of air passing through the perforated front is less than that through the perforations or openings of the metallic gauze; and this again destroys the tendency to currents.

The casing is provided with a ring 14 to enable it to be readily shifted longitudinally sufficiently to close the openings 4 and to cause the openings 9 of the casing to register with those of the guide frame to permit ventilation. The groove 2 is formed of a strip of sheet metal bent longitudinally and secured to the guide frame 1 but the parts may be integral.

The ventilator may be readily attached to a window sash all ready glazed by removing a portion of the glass and fitting the exposed edge of the glass in the groove and securing the glass at the groove and the flange at the opposite edges of the guide frame by putty.

By omitting the groove and the flange of the guide frame the latter may be readily secured in an opening of a sash or window frame if desired. The ends of the cylindrical casing are closed by approximately semi-circular plates 14^a. The finger ring 14 is hingedly secured to the casing and hangs down when not in use.

It will be seen that the window ventilator is simple and inexpensive in construction, that it is adapted to be readily applied to any window, and that it is capable of causing a constant change of air in a room without producing drafts. It will also be apparent that the ventilator is especially adapted for sick rooms, churches and public halls, and especially for railroad cars, where drafts usually accompany the slightest ventilation.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

The end cap which is adjustable is adapted to vary the width of the ventilator to suit the width of a window to make a proper fit.

What I claim is—

A ventilator comprising a guide frame constructed of sheet metal and provided at one edge with a strip of metal bent to form a glass receiving groove and provided at its opposite edge with a flange, of substantially the same thickness as a pane of glass and having between its edges openings, a ventilator casing slidingly mounted on the frame and provided with openings to register with those of the frame and having perforations, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELIAS C. ELLIS.

Witnesses:

O. E. HEMENWAY,

GORDON B. BISH.