No. 809,500. PATENTED JAN. 9, 1906.

G. W. FROHLICH.

WINDOW VENTILATOR.

APPLICATION FILED JAN. 23, 1905.

Fig. 1.

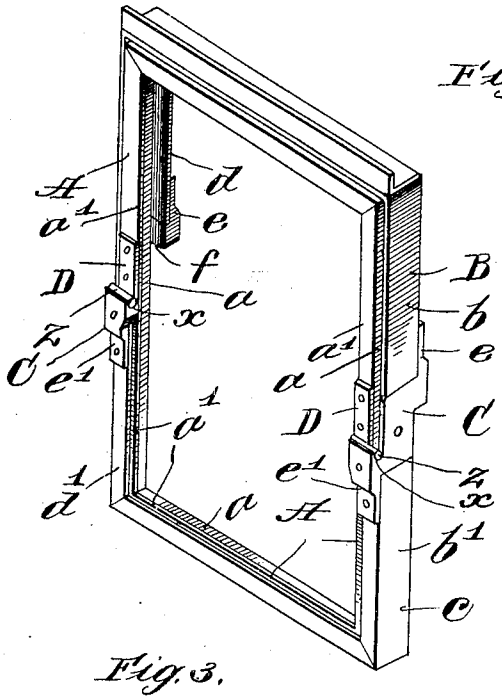


Fig. 2.

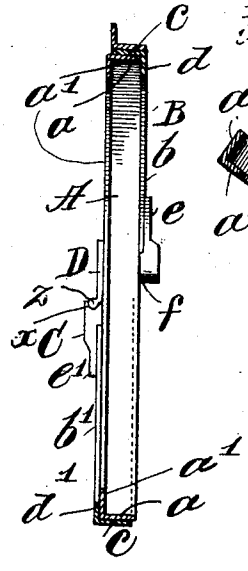


Fig. 3.

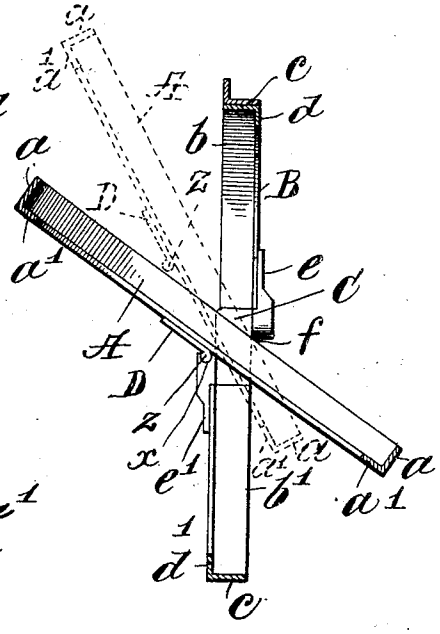
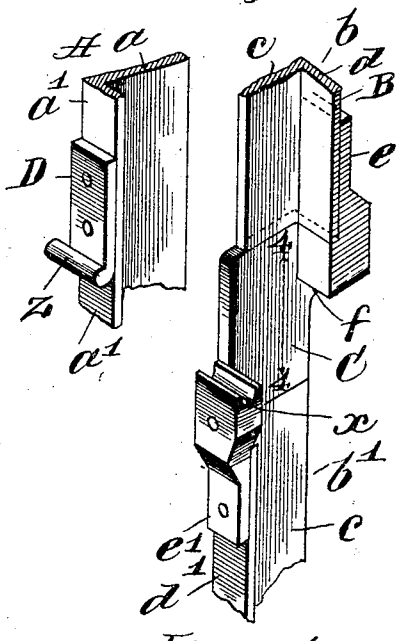


Fig. 4.



Witnesses:

G. A. Taubenschmidt

Geo. F. Brawner

Inventor:

George W. Frohlich.

UNITED STATES PATENT OFFICE.

GEORGE W. FROHLICH, OF CHICAGO, ILLINOIS.

WINDOW-VENTILATOR.

No. 809,500. Specification of Letters Patent. Patented Jan. 9, 1906.

Application filed January 23, 1905. Serial No. 242,227.

To all whom it may concern:

Be it known that I, GEORGE W. FROHLICH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window-Ventilators, of which the following is a specification.

My invention relates to window-ventilators, and has for its object to provide an improved, simple, and efficient construction whereby the parts of the ventilator may be easily and quickly assembled and disassembled, the frictional wear of the several parts being reduced to a minimum.

I will describe my invention more particularly by reference to the accompanying drawings, wherein—

Figure 1 is a perspective view of a ventilator embodying my invention, showing it in its closed position. Figs. 2 and 3 are sectional elevations showing the ventilator in different positions. Fig. 4 is an enlarged perspective view of the hinge-sections with fragmental portions of the frames attached thereto.

The same letters of reference designate the same parts throughout the several figures of the drawings.

The ventilator shown as embodying my invention comprises an inner frame A, pivoted to swing within an outer frame B. The outer frame B is the outer or stationary member of the ventilator and is preferably made of right-angular iron bent at intervals to conform to and fit snugly around the inner frame A. Said frame B is made of two pieces *b b'* of equal length, respectively, as shown in Fig. 1, the piece *b* extending above and *b'* extending below the couplers C, to which the ends of said pieces are attached, preferably by rivets. One of the flanges *c* of the iron frame B forms the outline and end surface of the frame—that is, the part which is attached to the window-frame or woodwork of the building. The other flanges *d* and *d'* extend inwardly at right angles from the flange *c*, but in reversed position, the flange *d* beginning at the couplers and extending upwardly and the flange *d'* beginning at said couplers and extending downwardly on the opposite side of the frame B.

The couplers C referred to each comprise a pair of vertical plates *e e'*, connected at their opposite sides by a web. The ends of the webs serve as seats for the sides of the ends of the frame-sections *b b'*, while the plates *e e'* are provided with shoulders level with said web ends to receive the rear portions of the ends of the frame-sections *b b'*. The upper end of each lower plate *e'* is provided with a horizontal groove *x* therein.

The inner frame A is preferably formed of one piece of right-angular-shaped iron bent at three intervals, the two ends of the iron being preferably riveted together. One of the flanges *a* of the iron which constitutes the frame A forms the outline or end surface of the frame, and the other flange *a'* supports the glass of the ventilator. The frame carries on its rear surface at each side a plate D, preferably a brass casting, the lower ends of said plates being enlarged and curved to ride in the grooves *x x*. Said lower ends preferably comprise cylindrical portions, whose swinging axes lie outside the plane of their supporting-plates. The lower end *f* of plate *e* of the outer frame is higher than the upper end of plate *e'* (in the present instance an inch) and affords a stop for the inner frame to prevent its opening too far, as shown in Fig. 3.

With my arrangement the grooves or sockets for the plate D are so placed as to prevent the outer frame from becoming worn by friction—an objection inherent in all prior devices.

I claim—

1. In a window-ventilator, the combination with an outer frame, of plates on the sides of said frame, each provided at its upper end with a horizontal groove or hinge-socket, an inner frame, and hinge-sections upon the rear surface and at the sides thereof adapted to ride in said sockets.

2. In a window-ventilator, the combination with an outer frame, of plates mounted on the rear walls of said frame, each provided at its upper end with a horizontal groove or socket, an inner frame, hinge-plates upon the rear surface and near the edges of said frame, each plate carrying at its lower end a cylindrical portion adapted to ride in one of said sockets, and stops carried by the outer frame adapted to limit the movement of said inner frame.

3. In a window-ventilator, the combination with an outer metal frame, of plates mounted on the rear walls of said frame, each provided at its upper end with a horizontal groove or socket, an inner metal frame, a hinge-plate upon the rear surface and at each side of said frame carrying at its lower end a cylindrical portion adapted to ride in one of

said grooves, and inwardly-turned flanges at the top and bottom of said outer frame, extending on opposite sides of the inner frame to serve as stops therefor.

4. In a window-ventilator, the combination with an outer metal frame composed of two U-shaped sections united at their ends by couplers, each coupler comprising two vertical plates, united by a web extending between opposite sides of said plates, the upper end of the lower plate having a horizontal groove therein, and an inner frame carrying upon its rear surface and at its sides plates having enlarged and rounded lower ends seated in said horizontal grooves.

5. In a window-ventilator, the combination with an outer frame consisting of two U-shaped members formed of angle-iron arranged to bring two flanges in opposition to form front and rear jambs, the remaining flanges forming top, bottom and sides of the frame, hinge-sections connecting said U-shaped members and having webs lying flush with the sides of said outer frame and abutting end to end therewith, said sections having front and rear extensions overlapping the front and rear jambs and provided with shoulders receiving the ends thereof, the lower extensions having horizontal grooves in their upper ends, an inner frame formed of angle-iron, hinge-sections for said frame having hinge portions seated in said grooves and forming the swinging axes of said inner frame, and stops engaging the upper and lower ends of said inner frame on opposite sides thereof.

GEORGE W. FROHLICH.

Witnesses:
ELIZABETH ELKIN,
JOHN SCHULTZ.