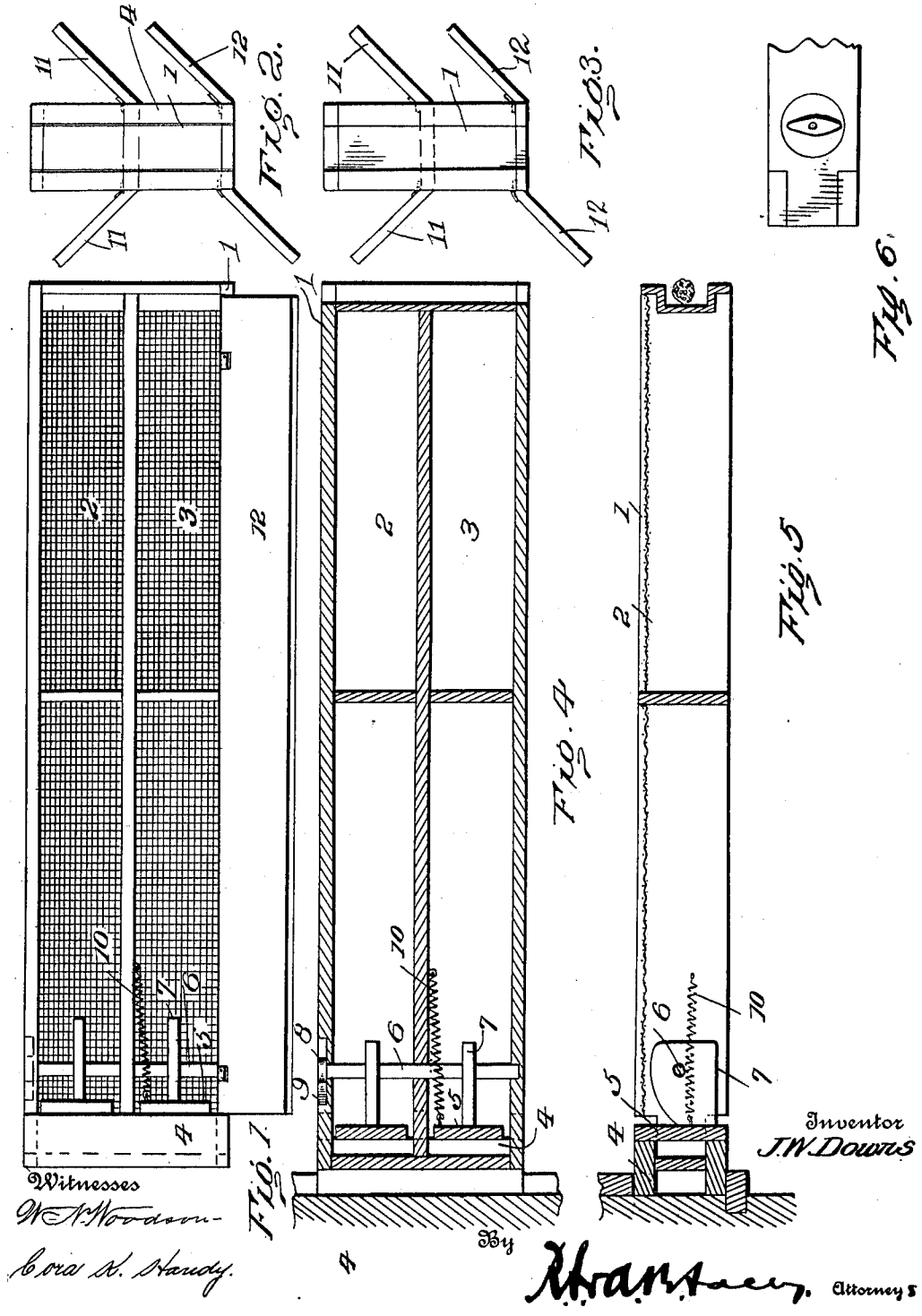
J. W. DOWNS.

WINDOW VENTILATOR.

APPLICATION FILED APR. 25, 1911.

1,020,970. Patented Mar. 26, 1912.



COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES W. DOWNS, OF ALAMEDA, CALIFORNIA.

WINDOW-VENTILATOR.

1,020,970. Specification of Letters Patent. Patented Mar. 26, 1912.

Application filed April 25, 1911. Serial No. 623,282.

To all whom it may concern:

Be it known that I, JAMES W. DOWNS, citizen of the United States, residing at Alameda, in the county of Alameda and State of California, have invented certain new and useful Improvements in Window-Ventilators, of which the following is a specification.

This invention has relation to window ventilators, and has for its object to provide a ventilator especially adapted to be used at the upper edge of a top sash, for the purpose of admitting air through the window frame at the top thereof, the said ventilator being provided with hinged shutters which when in operation are so positioned that those at the outer side of the window mutually cooperate as draft concentrators, while those at the inner side serve to deflect the draft in an upward direction.

With this object in view the structure includes a frame or body having openings therein and provided with an adjustable section adapted to move longitudinally of the body for the purpose of causing the body to fit snugly in the sash grooves at the opposite sides of the window frame. Cam devices are provided for shifting the said section and for holding the same in adjusted positions. Return springs are mounted upon the body and are connected with the said section and are adapted to draw the same back when the peripheries of the cams are moved away from the said section. Shutters are hingedly mounted upon the body and when in operation are adapted to be positioned at prescribed angles with relation to each other and with relation to the body.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a side elevation of the ventilator; Fig. 2 is an end view of the same; Fig. 3 is a view of the end of the ventilator opposite to that shown in Fig. 2; Fig. 4 is a longitudinal sectional view of the ventilator; Fig. 5 is a horizontal sectional view of the same; and Fig. 6 is a top plan view of a portion of the same.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The body 1 is of parallelepiped configuration and is provided with openings 2 and 3 which extend through from side to side. A section 4 is slidably mounted at one end of the body 1 and is provided with a shank 5 which projects within the body 1. A shaft 6 is journaled in the body 1 and is provided with a cam 7 which bears at its periphery against the edge of the shank 5. The shaft 6 is provided at its upper end with a handle 8 which is received within a recess 9 formed at the top of the body 1. A return spring 10 is secured at one end to the body 1 and at its other end to the shank 5 of the section 4. Therefore it will be seen that when the shaft 6 is rotated by one using the handle 8, the cam 7 will be turned about the axis of the shaft and thus the shank 5 and the section 4 will be moved longitudinally with relation to the body 1 and against the tension of the spring 10. When the said section 4 is moved in a direction away from the body, the entire structure is elongated so that the ventilator will fit snugly at its end portions in the sash grooves at the opposite sides of the window frame. When the deep portion of the cam 7 is turned away from the shank 5 the said shank and section 4 is drawn back toward the body 1 by the spring 10.

Upper shutters 11 are beveled at their lower edges and are attached at their beveled edges to the partition of the body by hinges applied to the inner sides of the shutters and the upper side of the partition. These shutters are designed to rest at right angles to each other when the ventilator is in position upon a sash with their outer edges uppermost and the bevels at the inner edges of the shutters bear against the edges of the partition and hold the shutters in the positions indicated. Lower shutters 12 are beveled at their inner edges and are attached to the lower side of the ventilator at the edges thereof by hinges applied to the upper surface of the lower side of the ventilator. The bevels of the last mentioned shutters are so arranged that when the ventilator is in operating position the outer lower shutter is downwardly disposed at its outer edge, while the inner lower shutter 12 is upwardly disposed at its inner edge. Therefore the outer upper and lower shutters 11 and 12 serve as draft concentrators and the inner upper and lower shutters 11 and 12 serve as deflectors for directing the draft toward the ceiling of a room.

To apply the ventilator to a window frame the top sash is lowered and the body 1 is rested upon the upper edge of the said sash. While this is being done the shutters are held in closed positions against the sides of the body. The shaft 6 is then turned so that the cam carried thereby will move the section 4 longitudinally so that the end portions of the structure will fit snugly in the sash grooves at the opposite sides of the window frame. The shutters 11 and 12 are then permitted to fall down in their proper operative positions as above described. The sash is then moved in an upward direction in the frame until the upper side of the body 1 comes in contact with the top of the frame. Thus the ventilator is positioned above the top sash and the inner shutters will deflect the air which passes in through the openings in the body 1 so that it will not blow directly against persons located in the vicinity of the window. At the same time ample ventilation is afforded.

Having thus described the invention, what is claimed as new is:

1. A ventilator comprising a parallelepiped body having openings, shutters arranged upon the body at the upper and lower edges of the openings, the outer shutters converging toward each other at their inner edges and adapted to serve as draft concentrators, and the inner shutters lying parallel with each other with their outer edge portions upwardly disposed.

2. A ventilator comprising a parallelepiped body, a section slidably mounted at the end of the body, a return spring connected with said section and the body, a shaft journaled in the body, a handle attached to the shaft and housed in the recess provided at the side of the body, a cam carried by said shaft and engaging the section, shutters located at the upper and lower edges of the openings, the outer shutters having their inner edge portions converging toward each other and adapted to serve as draft concentrators, the inner shutters lying parallel with each other and having their outer edge portions upwardly disposed.

In testimony whereof, I affix my signature in presence of two witnesses.

JAMES W. DOWNS. [L. S.]

Witnesses:
GERHARD OTZEN,
HUGO A. MULQUEEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."