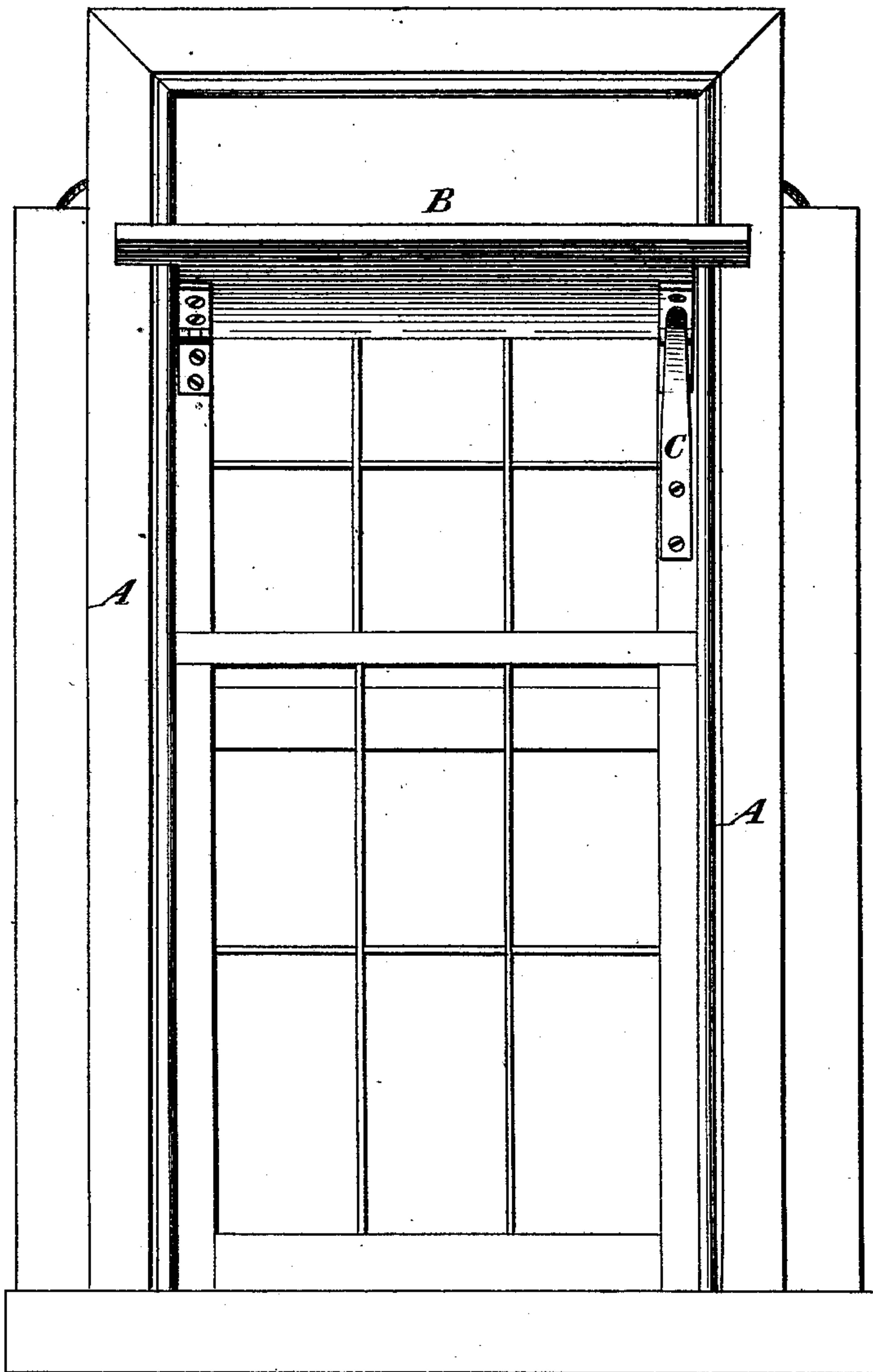


J. A. CONOVER.  
Window-Ventilator.

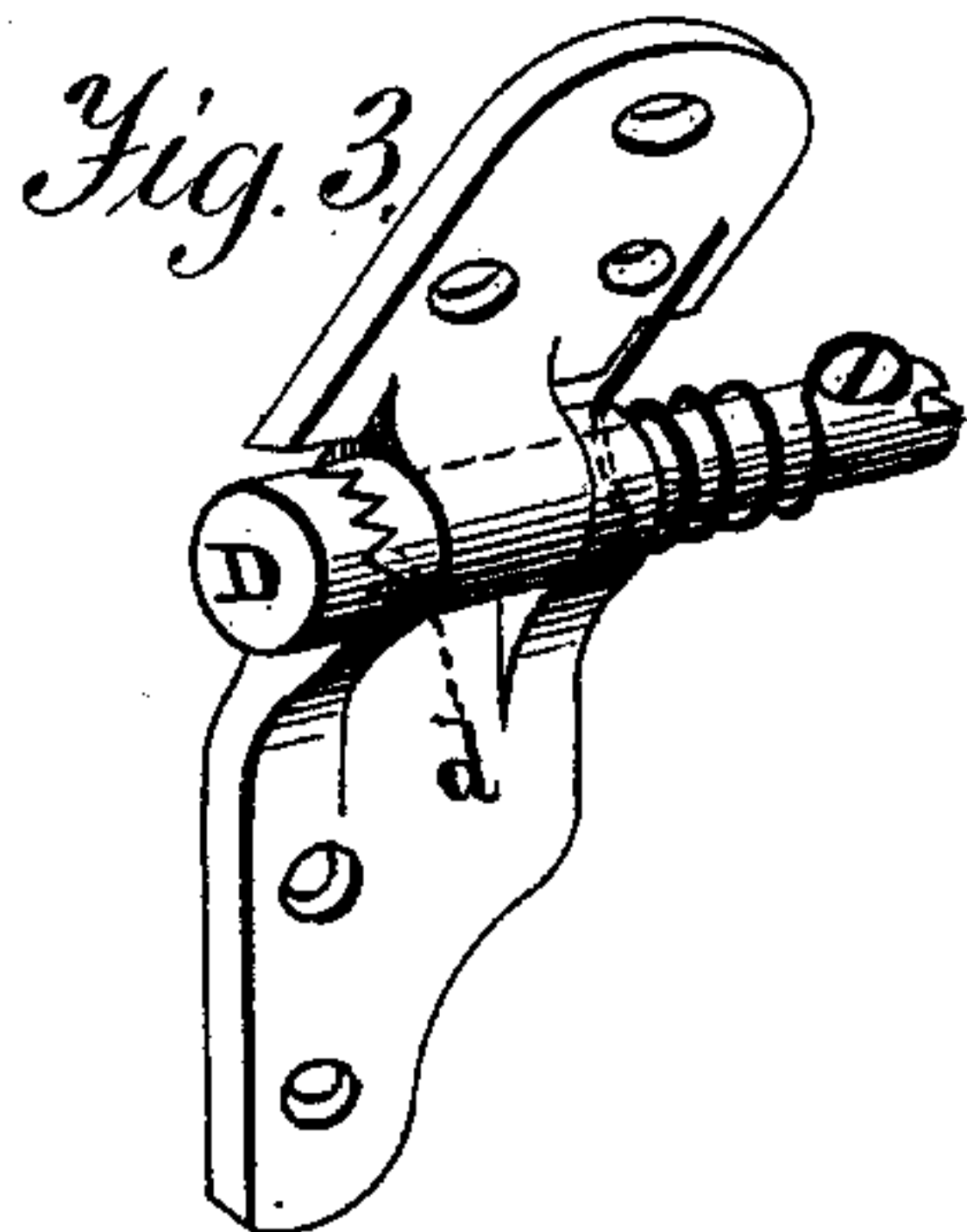
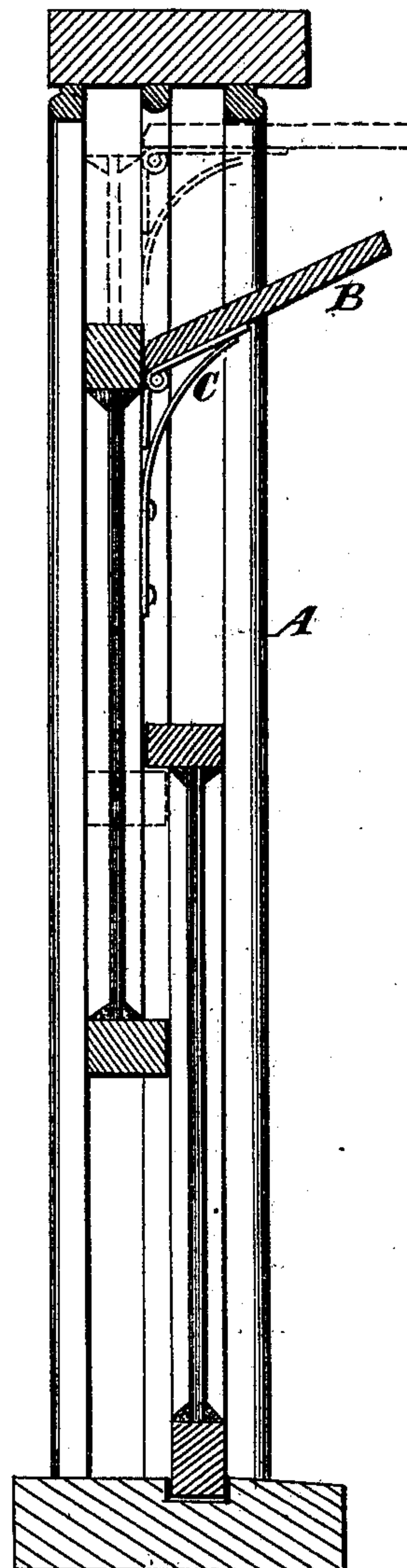
No. 215,099.

Patented May 6, 1879.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*  
*A. Rupert,*  
*James H. Lange.*

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*Inventor.*  
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# UNITED STATES PATENT OFFICE.

JACOB A. CONOVER, OF NEW YORK, N. Y.

## IMPROVEMENT IN WINDOW-VENTILATORS.

Specification forming part of Letters Patent No. **215,099**, dated May 6, 1879; application filed April 5, 1879.

*To all whom it may concern:*

Be it known that I, JACOB A. CONOVER, of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Window-Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side elevation of my improved window-ventilator; and Fig. 2 is a vertical section of the same, with the upper sash of the window, having the deflector, dropped a short distance. Fig. 3 is a detailed perspective view of the same.

The same part in the two figures is denoted by the same letter.

This invention relates to certain improvements in window-ventilators, which are simple, cheap, and easily constructed; and it consists in the hinging or pivoting to the inside of the upper sash of a deflector, adapted to be held so as to deflect the intrushing air upwardly, substantially as hereinafter more fully set forth.

In the accompanying drawings, A refers to a window-frame, with one or both of its sashes connected to cord passing over pulleys and weighted. B is a deflector, with one edge hinged or pivoted to the inside of the upper end of the upper sash, and its other edge projecting beyond the window-head, as clearly shown, particularly in Fig. 2.

The hinging or pivoting of the deflector enables it to swing downwardly and permit of the sash being shoved up to its place.

C is a spring fastened to the sash and bearing against the deflector B, to hold the deflector at an angle, say, of about twenty degrees to a horizontal plane, as shown in full lines in Fig. 2, by which the intrushing external or cold air may be deflected upwardly in its passage from or through the opening produced by lowering the upper sash into the room. The deflected intrushing air striking the ceiling will be again deflected, but oppositely, and

disseminated through the room, and thus obviate the creation of a draft and the producing of a chilling effect.

The spring, instead of being separate from the hinge or pivot of the deflector, may be coiled around its pintle or pivot, and thus form a part of it or a spring-hinge.

It is obvious that, in lieu of the spring, a projection or stop may be used to limit the downward movement of the deflector; but it would not yield to allow the sash to be shoved up to its place when the ventilator is not needed.

One end of the pintle or pivot of the deflector-hinge is provided with a toothed head, D, which engages with corresponding teeth on one of the eyes of one of the hinge-leaves, as at *d*. The object of this is to provide for the holding of the deflector, as against the pressure of its spring, open at any desired angle, and to vary or increase the tension of the spring.

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

1. In a window-ventilator, the deflector hinged or pivoted to the inside of the upper sash, and adapted to be held at a given angle to a horizontal plane, substantially as and for the purpose set forth.

2. In a window-ventilator, the deflector hinged or pivoted to the inside of the upper sash, and acted upon by a spring, to enable the holding of the same at a given angle, and so as to permit of its yielding downwardly and allow the shoving of the sash up to its place, as set forth.

3. The deflector, with its hinge pintle or pivot provided with a toothed head, D, engaging with corresponding teeth on one of the hinge-leaves, and a spring, substantially as and for the purpose set forth.

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

JACOB A. CONOVER.

Witnesses:

HENRY M. NIVER,  
ALONZO R. ODELL.