

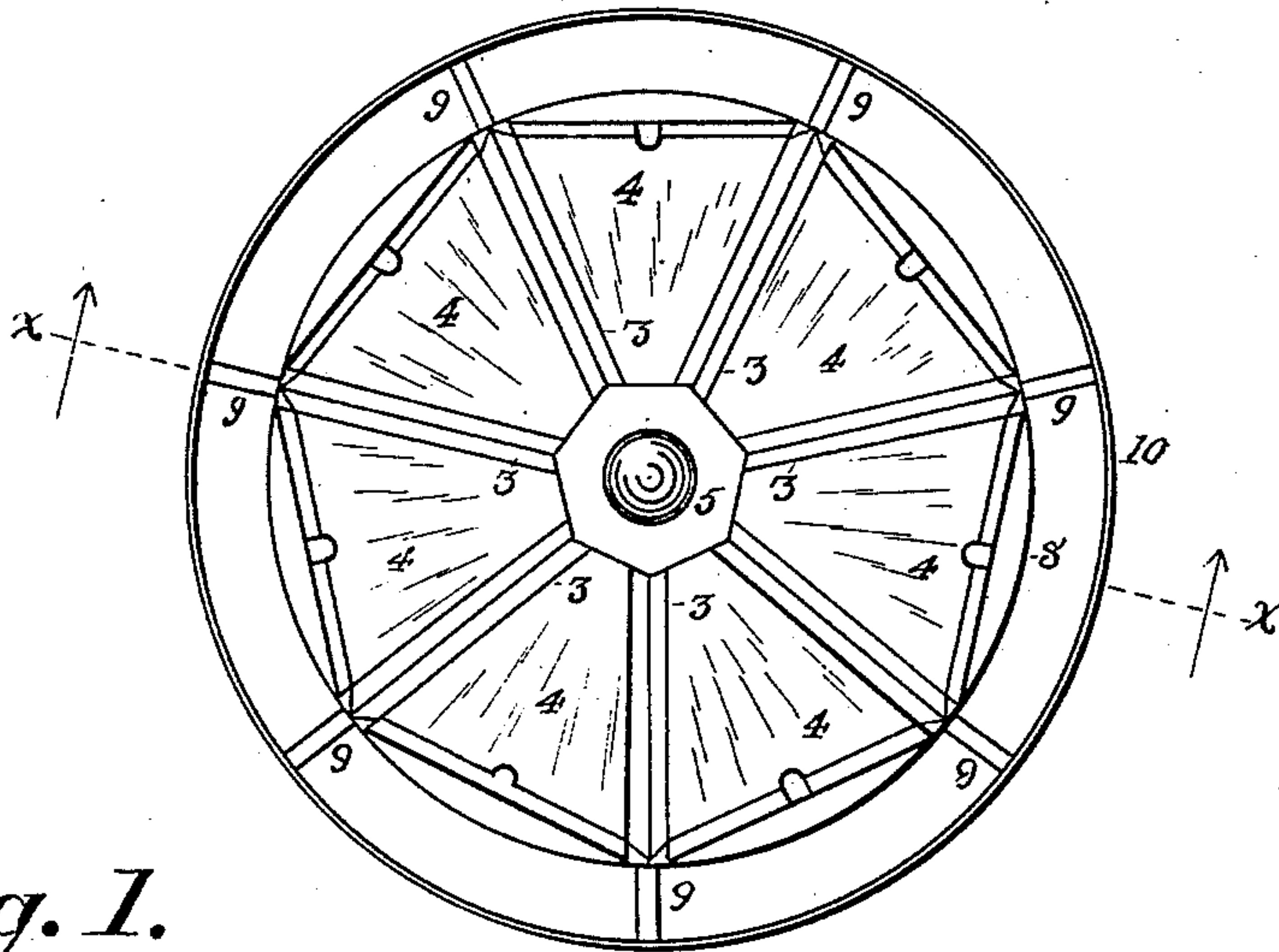
No. 677,512.

Patented July 2, 1901.

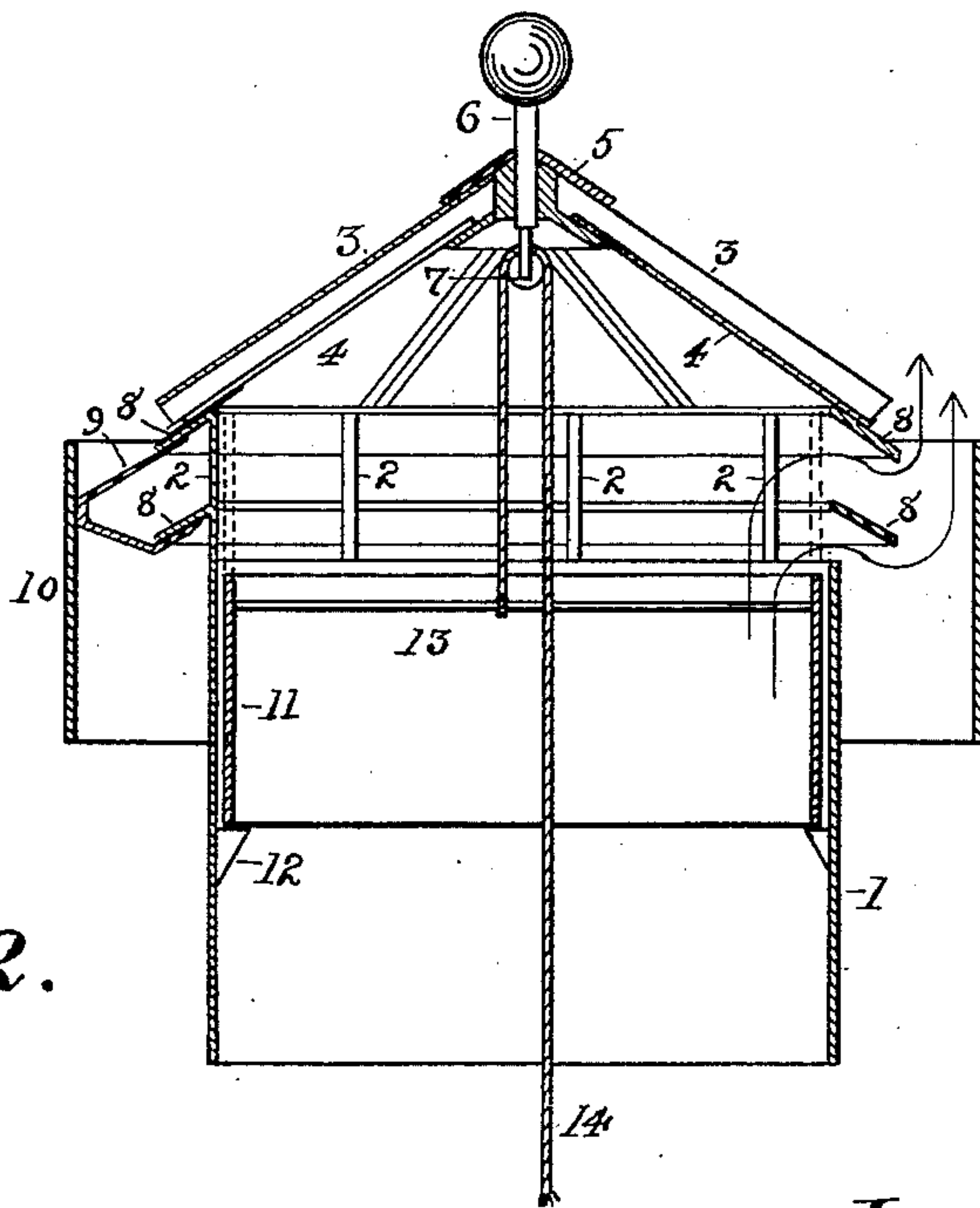
F. M. HARPHAM & A. AKERS.  
COMBINED SKYLIGHT AND VENTILATOR.

(Application filed Apr. 29, 1901.)

(No Model.)



*Fig. 1.*



*Fig. 2.*

*Witnesses:*

*Maude Zwisler.*  
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# UNITED STATES PATENT OFFICE.

FRED M. HARPHAM AND ALFRED AKERS, OF AKRON, OHIO.

## COMBINED SKYLIGHT AND VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 677,512, dated July 2, 1901.

Application filed April 29, 1901. Serial No. 57,954. (No model.)

*To all whom it may concern:*

Be it known that we, FRED M. HARPHAM and ALFRED AKERS, citizens of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a certain new and useful Improvement in a Combined Skylight and Ventilator, of which the following is a specification.

Our invention has relation to improvements in combined skylights and ventilators for foundries, machine-shops, and other buildings where such accessories are needed.

The object of our invention is to produce a new and improved device of the kind specified in which the ventilator may be opened, closed, or adjusted at will and when open will not permit the entrance of rain.

To the aforesaid purpose our invention consists in the peculiar and novel construction, arrangement, and combination of parts hereinafter described and then specifically pointed out in the claims, reference being had to the accompanying drawings, which form a part of this specification.

In the accompanying drawings, in which similar reference-numerals indicate like parts in both views, Figure 1 is a plan of our improved skylight and ventilator, and Fig. 2 a vertical section of the same at the line  $x x$ .

Referring to the figures, 1 is the sheet-metal air-flue, that extends through the roof of the building, on the upper end of which are attached at intervals posts 2, that are practically extensions of the flue, and on these is supported a conical roof consisting of radial bars 3, between which and supported thereby are panes of glass 4. In the center of the roof is a polygonal conical cap 5, in the center of which is supported a post 6, to the under end of which is secured a pulley 7. Secured to the posts about the opening between the flue 1 and roof 2 are two annular conical deflecting-plates 8 of the ordinary construction. Supported on brackets 9, secured to the deflecting-plates 8, is an annular sheet-metal shield 10. Within the flue 1, concentric therewith and free to move vertically therein, is a sheet-metal sleeve 11, which rests at its low-

est position on brackets 12 on the inside of the flue 1. Across the top of the sleeve 11 is a cross-bar 13, to which is attached a cord or small rope 14, that passes over the pulley 7 and down into the apartment below.

By drawing the rope 14 the sleeve 11 will be raised and close the opening between the flue 1 and roof or so much thereof as may be needed to regulate the escape of air from the apartment below.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. An improved combined skylight and ventilator consisting of a flue to pass through the roof of a building, with a roof having glazed openings supported at a distance above its upper end, and a sleeve sliding in said flue adapted to be raised and close the opening between the flue and its roof and means for raising said sleeve, substantially as shown and described.

2. An improved ventilator for shops, of a flue to pass through the roof and a roof for said flue supported at a distance from its upper end, of a sleeve arranged to slide in said flue and means to raise said sleeve to close the space between the flue and its roof, substantially as shown and described.

3. An improved ventilator and skylight, consisting of a flue to take air from an apartment, and a roof for said flue supported at a distance above its upper end and annular deflecting-plates about the opening between said flue and roof, of a sleeve arranged to slide in said flue to close the opening between the flue and roof, a pulley supported in said roof and a cord running over said pulley to raise said sleeve, substantially as shown and described.

In testimony that we claim the above we hereunto set our hands in the presence of two subscribing witnesses.

FRED M. HARPHAM.  
ALFRED AKERS.

In presence of—  
MANLEY WALDRON,  
C. E. HUMPHREY.