

No. 778,204.

PATENTED DEC. 20, 1904.

C. H. PORTER.
VENTILATING DEVICE.
APPLICATION FILED JUNE 18, 1904.

NO MODEL.

Fig 1.

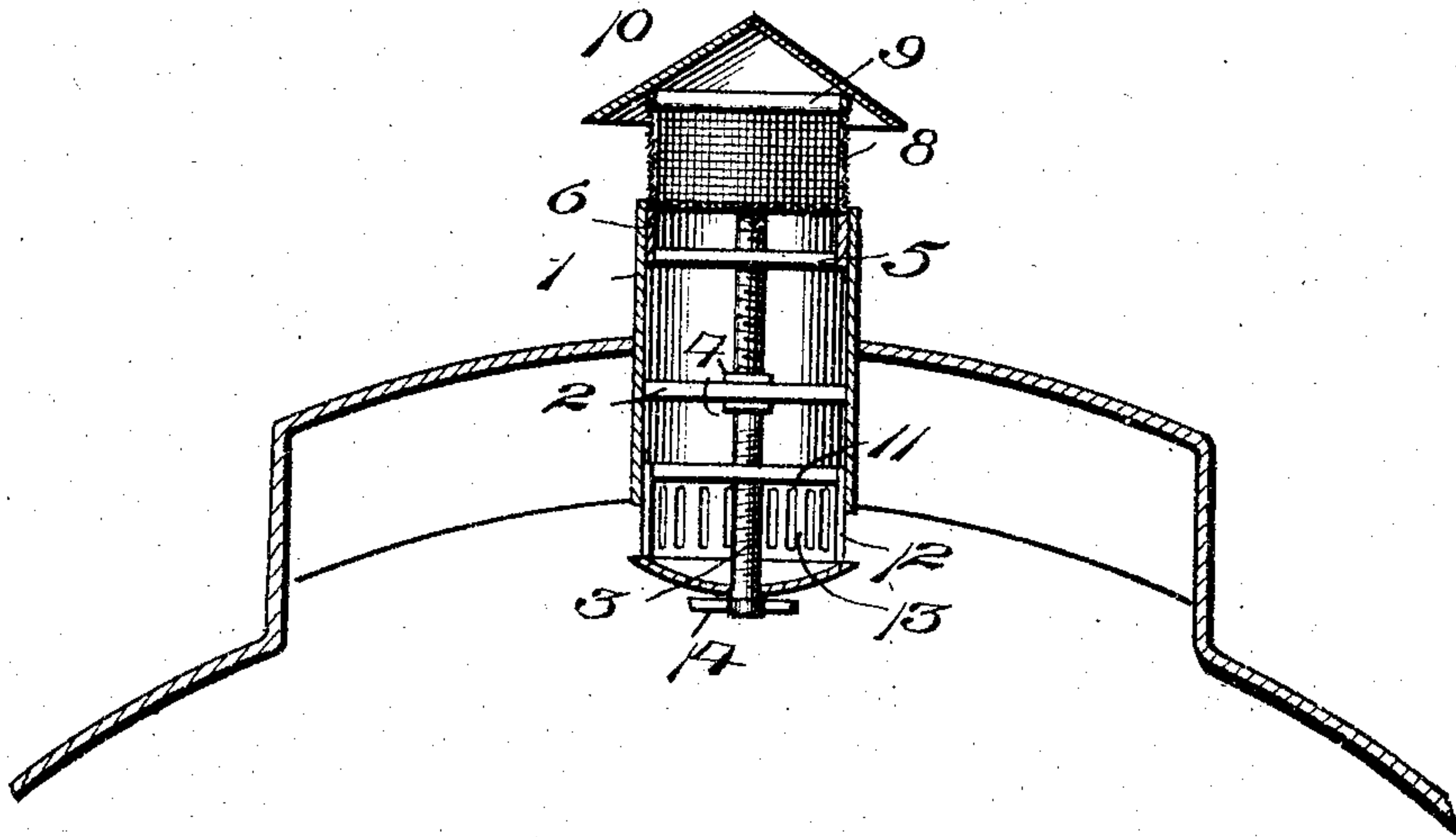
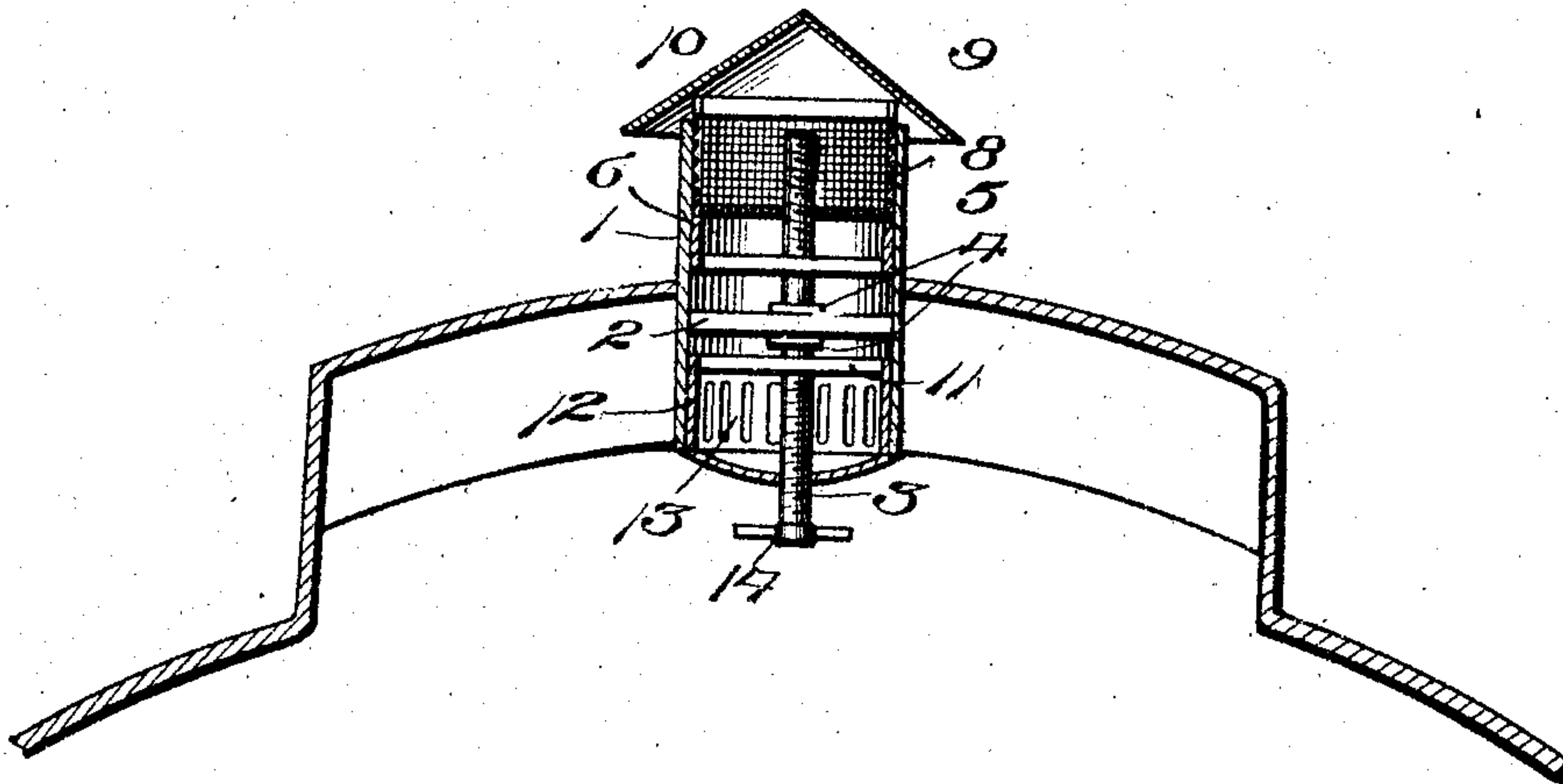


Fig 2.



WITNESSES:

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VENTILATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 778,204, dated December 20, 1904.

Application filed June 18, 1904. Serial No. 213,153.

To all whom it may concern:

Be it known that I, CHARLES H. PORTER, a citizen of the United States, residing in Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Ventilating Devices, of which the following is a specification.

My invention relates to improvements in ventilating devices; and the object is to simplify and improve the existing devices used for the purpose of taking foul air from cars or other apartments.

In the ordinary means of ventilating by adjustable vanes or swinging members the pivoted vanes located in the lantern of a car are attended with more or less inconvenience in attaining perfect ventilation, because the air hugs the exposed walls of the lantern and is confined between the ceiling and the roof of the lantern, so as to have but little or no vertical escape. I propose to take the foul air which rises into the lantern from below directly from the car instead of forcing pure air into the lantern, as generally takes place under this mode of ventilation in common use.

As stated, my present invention relates to improvements in ventilating means or devices whereby I provide a simply-constructed and efficiently-operating device, which is also durable for the purposes mentioned and intended.

The device is particularly adapted for car ventilation, but may with equally good results be utilized for ventilating roofs and attics of buildings and similar constructions.

With these purposes and objects in view the invention consists in the novel construction of parts and their aggroupment in operative combinations, as will be hereinafter fully specified and then the asserted novelty will be particularly pointed out and distinctly claimed.

I have fully and clearly illustrated my invention in the accompanying drawings to be taken as a part of this specification.

Reference being had to the drawings, Figure 1 is a vertical transverse section taken centrally through the device, the complete assemblage of the parts positioned as being open to permit free ventilation, the lantern and a portion of the car-roof being shown in section. Fig. 2 is a similar view showing the

parts as closed to prevent the advent of the air through the device.

In the drawings the same parts appearing in both figures are designated by similar reference notations.

Referring to the drawings, 1 designates a pipe or cylinder, of metal or any proper material and made of such size as may be required to effect the object. At a proper point diametrically across the interior of the cylinder is fixed a cross-bar 2, made with a central aperture through which the actuating-screw passes.

3 designates the actuating-screw, which is held against endwise movement by collars 4, positioned thereon on opposite sides of the cross-bar 2. The threads of the screw above and below the collars run in opposite directions, so as to move the ventilating members oppositely, drawing them within the cylinder and pushing them out into ventilating position at the same time. On the upper portion of the screw is arranged a cross-bar 5, having a central threaded aperture through which the screw engages and carrying a ring 6, to the upper end or edge of which is secured a wire-netting cylinder 8, having a bottom of the same material, as shown, and on the top of this is fixed a stiffening-ring 9. It will be readily perceived that by turning the actuating-screw in a certain direction the foraminated cylinder will be projected out of the cylinder 1 and on reversal of the screw the cylinder 8 will be drawn within the cylinder, as shown in Fig. 2 of the drawings. On the ring 9 over the cylinder is secured a hood 10, which extends beyond the edge of the ventilating-cylinder 8 and shuts out all material which might otherwise enter the device from the open top.

On the screw 3 below the cross-bar 2 is a cross-bar 11, having a central threaded aperture engaged by the screw. The ends of the cross-bar 11 are fixed to the upper edge of a ventilating-ring 12, slidably arranged within the cylinder 1 and formed with ventilating-slots 13, placed in vertical direction. The ventilating-ring 12 is made with a bottom, through which the actuating-screw 3 extends, substantially as seen in the drawings, and to

the lower end of the screw is fixed a suitable handpiece 14, which in the upper movement of the screw lodges against the under face of the bottom of the ventilating-ring and prevents the upper ventilating-cylinder from being moved up farther than it should be when it is desired to open the ventilating parts to the limit.

In the above description and drawings my improved ventilator is shown as applied to the roof and lantern of a passenger-car; but, as stated, the device may be utilized wherever it is desired to carry the foul air from an apartment.

The operation of the device is readily discerned from the foregoing description, taken in connection with the illustrations. The screw may be turned to project the ventilating parts in opposite directions from the cylinder 1 to their limit or to such intermediate position as may be desired, and then by reversing the screw the parts may be drawn within the cylinder and draft through the device entirely shut off.

The upper reticulated cylinder is made somewhat longer than the lower ventilating-ring, so as to provide ample discharge of air therethrough rising from the freer influent slots in the ventilating-ring in the base of the cylinder, and this differential movement is accomplished by making the screw-threads of the lower stem of the actuating-screw of less pitch than the threads of the upper stem, but both ventilating members move in unison and reach their closed and opened positions synchronously.

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

1. A ventilator for cars and similar constructions, comprising a cylinder open at each end, upper and lower closures for the ends of the cylinder slidably positioned in the cylinder, and means for moving the closures in opposite directions.

2. A ventilator for cars and similar constructions, comprising a cylinder, a reticulated cylinder slidably positioned in the upper end of the first-mentioned cylinder, a head on the

reticulated cylinder, a ring provided with air-passages slidably arranged in the lower end of the cylinder, and a right and left hand screw held against endwise movement within the cylinder to move the ventilating members in opposite directions.

3. A ventilating device for cars and similar constructions, comprising a cylinder, a support within the cylinder provided with a central aperture, a right and left hand screw held against endwise movement in the support, a reticulated cylinder slidably positioned in the upper end of the first-mentioned cylinder and provided with a reticulated bottom and actuated by the screw, a head on the reticulated cylinder, a ring provided with air-passages and a closed lower end, slidably disposed in the lower end of the inclosing cylinder, and actuated by the screw, and a handpiece on the lower end of the screw adapted to lodge against the bottom of the ring, substantially as described.

4. A ventilator comprising a cylinder open at each end, upper and lower closures within the cylinder, and a screw connected with the cylinder and with said closures and threaded for operation to move the closures in opposite directions.

5. A ventilator comprising a cylinder open at each end, upper and lower closures within the cylinder, a cross-bar arranged transversely of the cylinder, and a screw mounted for revolution in said bar, said screw having threaded connection with the closures to move them in opposite directions.

6. A ventilator comprising a cylinder open at each end, a bar fixed transversely of the cylinder, a closure positioned in the cylinder above the bar, a closure positioned in the cylinder below the bar, and a screw-rod revolvably mounted in the bar and reversely-threaded above and below the bar, said threaded portions of the rod respectively engaging the closures.

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

CHARLES H. PORTER.

Witnesses:

JOHN L. FLETCHER,
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