S. SEABURY.
Ventilator.

No. 202,968. Patented April 30, 1878.

Fig. I.

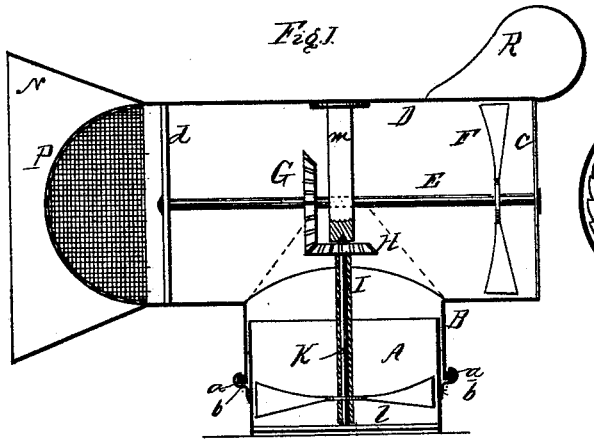


Fig. II.

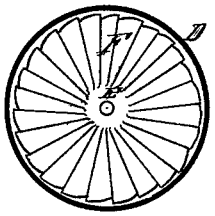


Fig. III.

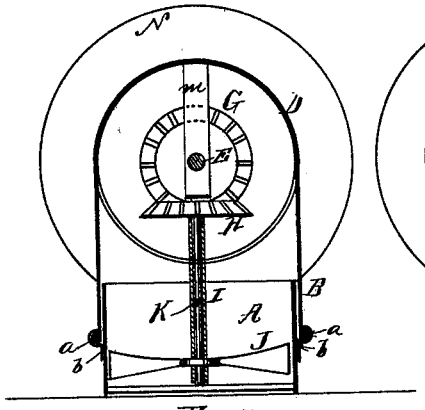


Fig. V.

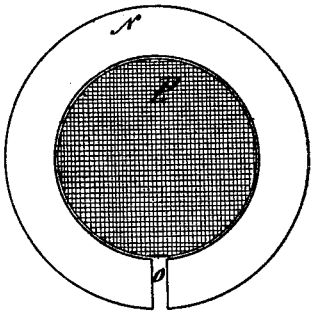
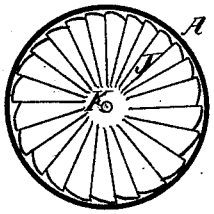


Fig. IV.



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UNITED STATES PATENT OFFICE.

SAMUEL SEABURY, OF NEW YORK, N. Y.

IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. **202,968**, dated April 30, 1878; application filed October 12, 1877.

To all whom it may concern:

Be it known that I, SAMUEL SEABURY, of New York city, county and State of New York, have invented new and useful Improvements in Ventilators; and I hereby declare that the following is an exact and true description of my invention, which will enable others to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

The object of my invention is to provide for a more perfect ventilation for railroad-cars; but the same means may be adopted for other purposes, such as for buildings, ships, &c.

My invention consists in placing a vertical cylinder on the roof of a railway-car. This cylinder is placed within another vertical cylinder fastened to the center and under side of a horizontal cylinder. The cylinder which is fastened to the roof is held to the other vertical cylinder in such a manner that it cannot be accidentally detached, but is allowed to revolve freely. In the center of the horizontal cylinder is placed an axle, revolving in suitable journals in bars fastened inside to each end of the cylinder. Onto this axle is keyed a bevel cog-wheel, which gears into another bevel cog-wheel fastened onto a sleeve placed over a vertical axle, which has its bearings in a vertical post held to the horizontal cylinder, and also in a cross-bar held to the bottom of the stationary vertical cylinder. Onto this before-mentioned sleeve is fastened a wheel, the arms of which are so placed that they will exhaust the air from the room below, and force it through the revolving vertical cylinder into the horizontal cylinder, where it is carried out of the rear end by the combined force of the air entering the front and the action of another wheel, similarly constructed to the before-mentioned wheel, and keyed to the rear end of the horizontal axle. To the front of the horizontal cylinder is fastened a mouth-piece provided with a slot in the lower part. Inside this mouth-piece is placed a wire-gauze, covering over the opening of the horizontal cylinder, in order to prevent soot, cinders, or sand from entering the horizontal cylinder. This wire-gauze covering is, by preference, made of a funnel-shaped or semicircular form, extending outward, so that a greater surface will be presented to the entering air, and so that the cinders and sand strike it obliquely, and thereby are caused to strike against the inside of the mouth-piece, in the lower part of which is a slot, through which these particles drop to the ground.

Referring to the drawings, Figure 1 is a sectional elevation of my improved ventilator. Fig. 2 is a rear-end view of the same. Fig. 3 is a transverse section through line *x x*, Fig. 1. Fig. 4 is a bottom view, and Fig. 5 is a front view.

A is the stationary vertical cylinder. B is the revolving vertical cylinder, held to the cylinder A by rim *a* and lips *b*. This cylinder is so connected to the horizontal cylinder D that it forms a part of the same.

E is the horizontal axle, journaled in cross-bars *c* and *d* in the center of the cylinder D. To this axle is fastened the screw-wheel F, and also the bevel cog-wheel G, which gears into the bevel cog-wheel H, fastened on the sleeve I, to the lower part of which the screw-wheel J is fastened. This sleeve is placed over the vertical axle K, the lower end of which is fastened to the center of the cross-bar *l*, and upper end is centered or pivoted in the lower part of the bar *m*, the upper end of which is fastened to the horizontal cylinder D.

N is the mouth-piece, with slot *o*, and P is the wire-gauze covering. R is an arm, serving to direct the horizontal cylinder with the mouth-piece against the wind.

Having thus described my invention, I desire to claim—

The combined cylinders B and D, the latter with mouth-piece N, wire-gauze covering P, axle E, with screw-wheel F and bevel-wheel G, in combination with the cylinder A, with axle K, sleeve I, with screw-wheel J, and bevel-wheel H, all arranged substantially as and for the purpose set forth.

This specification signed this 3d day of October, 1877.

SAMUEL SEABURY.

Witnesses:
F. BARRITT,
CHR. RIEGELMAN.