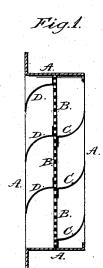
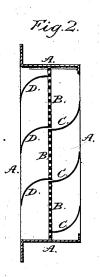
## G. HAYES. Ventilators.

No. 198,107.

Patented Dec. 11, 1877.





Witnesses John H. Gilson Charles Hayes

Inventor, George Hayes

## UNITED STATES PATENT OFFICE.

GEORGE HAYES, OF NEW YORK, N. Y.

## IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. 198,107, dated December 11, 1877; application filed March 31, 1877.

To all whom it may concern:

Be it known that I, GEORGE HAYES, of No. 71 Eighth avenue, in the city, county, and State of New York, have invented a new and useful Improvement in Ventilating-Louvers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention relates to ventilating-louvers for turrets, church-towers, clear-stories of railroad-depots, dormers, soffits of exterior cornices, the bases of skylights over public urinals and water-closets, the ventilating of freight-cars or steamboats, and for all other places or portions of buildings or structures where permanent ventilation is required to the perfect exclusion of snow, rain, or substances floating in the air.

Said invention, further, has for its object, or certain of them, the same as those described in Letters Patent granted to me December 7, 1875, being No. 170,852, and also Letters Patent of February 22, 1876, being No. 173,787, but it more fully resists a severe driving snow or rain storm.

Said invention consists in a combination of a perforated metal plate or reticulated portion extending over and forming a ventilating-surface, and a series of gutters arranged, one above the other, on the interior thereof, and a series of ledges of a straight, angular, or curved form, arranged, one above the other, on the exterior of the perforated or reticulated portion, said gutters and ledges forming the louvers. While the ledges upon the outside of the perforated or reticulated surface prevent the snow or rain from passing into the interior, the inner gutters will effectually catch any moisture which may accumulate or become attached to the inner side of the perforated or reticulated surface.

The aforesaid result may be arrived at in a modified manner—namely, instead of the gutters and ledges being affixed to the perforated portion, the ledges, gutters, and perforated portion may be in one piece, as shown in drawing.

Referring to the accompanying drawing, Figure 1 represents a vertical transverse section of a louver constructed in accordance with my invention; Fig. 2, a vertical transverse section of the modified manner herein referred to.

A is the main case or frame, to which the louvers, gutters, and perforated parts are affixed. B is the perforated metal plate or reticulated portion. C is the gutter, and D the ledges.

Having thus described my invention, I claim—

A louver having in combination a perforated or reticulated portion, over which a series of gutters is distributed on the inner side, and a series of ledges on the outer side, as herein described.

GEORGE HAYES.

Witnesses:
JOHN H. GIBSON,
THOMAS MOONEY.