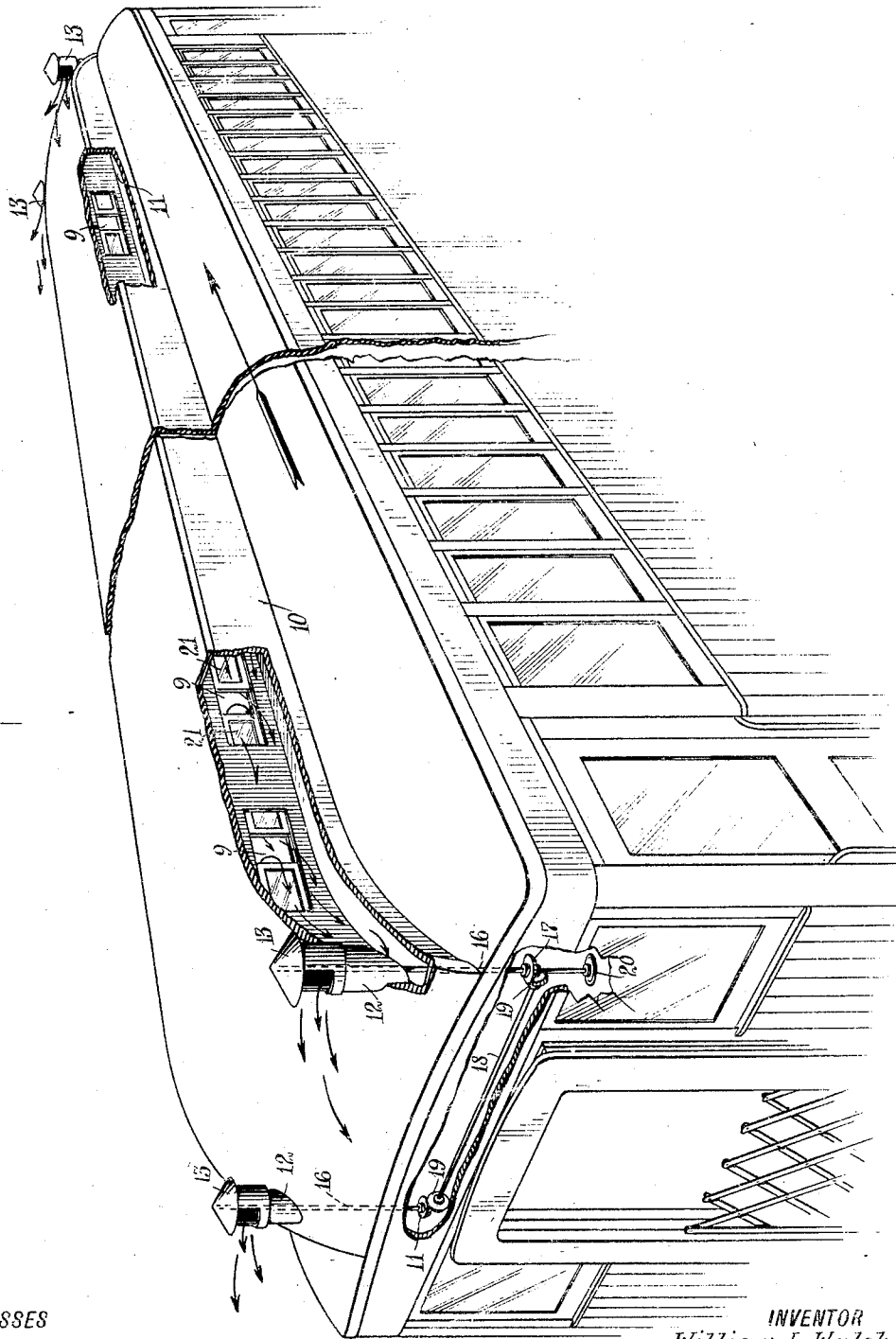


APPLICATION FILED AUG. 31, 1911.

2 SHEETS—SHEET 1.

1,056,608.



Wm. H. Long
Emmuck

BY *Merrill Co.*
ATTORNEYS

W. L. WALSH.
CAR VENTILATOR.
APPLICATION FILED AUG. 31, 1911.

1,056,608.

Patented Mar. 18, 1913.

2 SHEETS—SHEET 2.

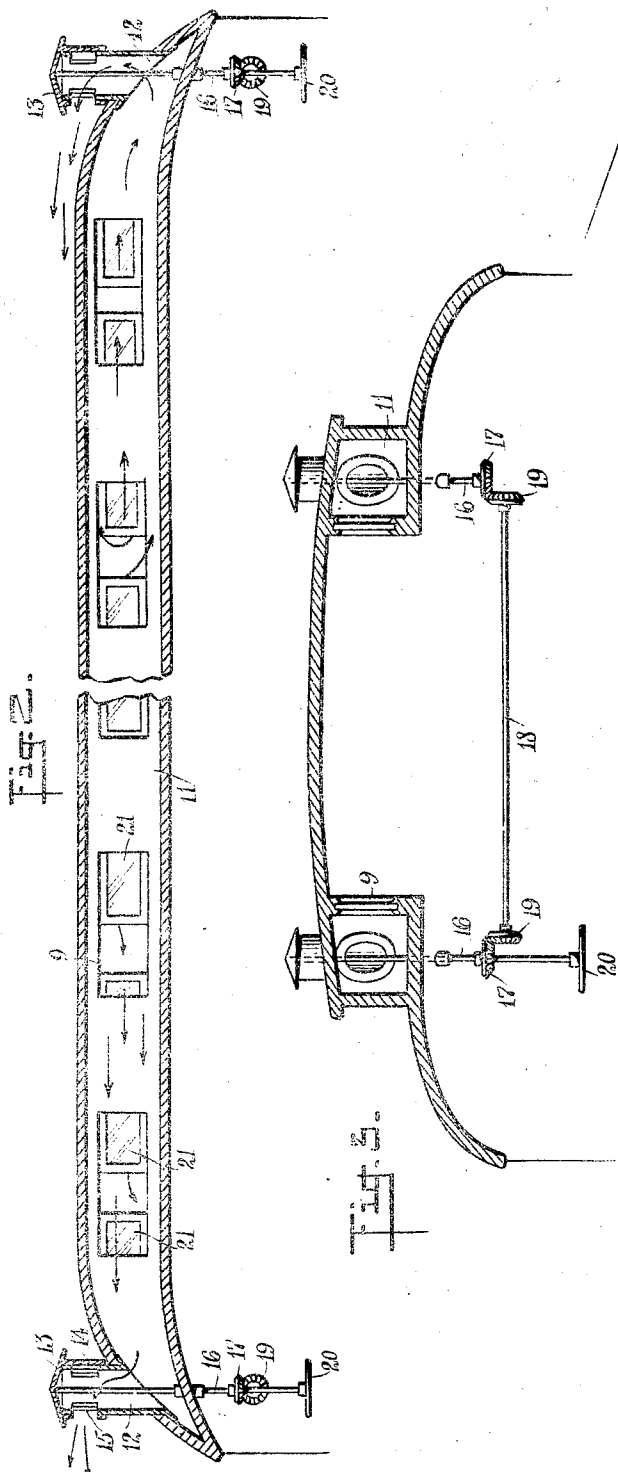
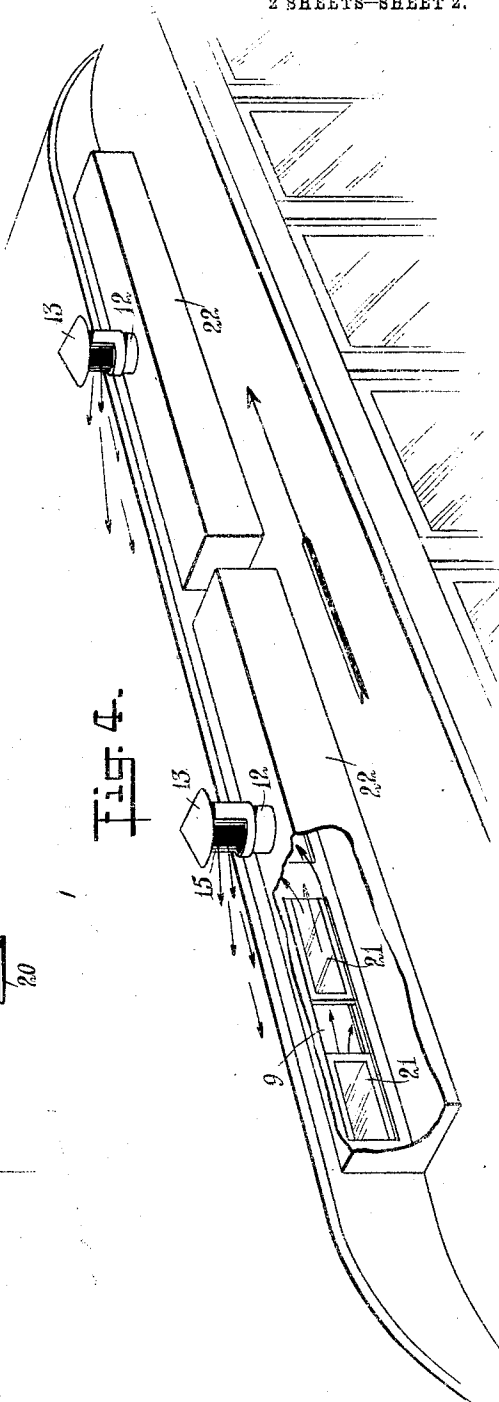


Fig. 3.

Fig. 4.



WITNESSES

W. L. Walsh
E. M. Mark

INVENTOR
William L. Walsh

BY *Munn & Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM L. WALSH, OF NEW YORK, N. Y.

CAR-VENTILATOR.

1,056,608.

Specification of Letters Patent.

Patented Mar. 18, 1913.

Application filed August 31, 1911. Serial No. 647,011.

To all whom it may concern:

Be it known that I, WILLIAM L. WALSH, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Car-Ventilator, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide a flue or covered passage from which the air may be drawn by the operation of the train and regulating devices to govern the extent of the communication between the interior of the car and said passage; to provide auxiliary boxes or chambers having communication with the interior of the car through controlled passages, the air in said chambers being exhausted by the travel of the car; to provide means operable from within the body of the car for varying the disposition of the draft members of the ventilator; and to provide draft members for said flue and boxes extended beyond the influence of the eddying currents formed by the movement of the car body.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings, in which like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a perspective view of a railway car having a ventilator constructed and arranged in accordance with the present invention; Fig. 2 is a longitudinal vertical section taken through the flue of said ventilator; Fig. 3 is a cross section of the top of the car showing the ventilator as applied thereto; and Fig. 4 is a perspective view showing a modified form of the invention.

As shown in the accompanying drawings, the ventilating windows 9, 9 open into a passage or flue formed by extending the lantern roof of the car over the main roof and filling the space between the lantern roof and main roof by means of solid boxing sides 10. By this arrangement a box-like flue 11 is formed, as shown best in Figs. 2 and 3 of the drawings. Disposed at intervals, and preferably at the ends of the flue thus formed, are small hollow towers 12. As seen best in Fig. 2 of the drawings the towers 12 are each covered by a hood 13. The hoods 13 have a solid cover and a cylindrical side wall 14. The side walls 14 are perforated to form the openings 15.

The hoods 13 are fixedly mounted at the upper end of vertically disposed shafts 16. Each of the shafts 16 has rigidly mounted thereon a bevel gear wheel 17. The towers 12 and covering hoods therefor are arranged in pairs, preferably disposed at the same position relative to the length of the car. The shafts 16 at each end of the car are operatively connected by a transmission shaft 18. The shaft 18 is provided with a bevel gear wheel 19 fixedly mounted at each end of the said shaft and in mesh with the bevel gear wheel 17 on each of the shafts 16. One of the shafts 16 is elongated and is provided at the lower end thereof with a hand wheel 20 whereby the train attendant may rotate the shafts 16 and hoods 13 connected therewith.

In the operation of the invention the hoods 13 are so disposed with reference to the travel of the car that the openings 15 are turned from the direction of travel, thus forming a suction to draw from the flues 11 the air contained therein. Rarefaction of the air within the flues 11 is prevented by the flow of the air from the body of the car into the said flues to be removed therefrom through the towers 12 and the hoods 13 therefor. The quantity of air passing from the body of the car to the flues 11 is regulated by the adjustment of the sashes 21 to vary the opening of the windows 9.

As seen by reference to Fig. 2 of the drawings, the operation of the towers 12 at each end of the flues 11 draws the air from the said flues in both directions and toward both ends thereof. In this manner a constant drain on the dead or foul air of the car is exerted by the flues 11 and the towers 12 operating therein.

In Fig. 4 of the drawings a modified form of the invention is shown, wherein the towers 12 and hoods 13 are mounted upon boxes 22. The boxes 22 are constructed of any suitable material, that preferred by me being sheet metal. The boxes are open toward the windows 9. The length of the said boxes 22 is preferably such as to cover two or more of the windows 9. As shown in the drawings, it is preferred that each of the boxes should have a tower 12 centrally located thereon. In constructing the towers 12 and hoods therefor care is exercised not to raise the tower above the car roof more than a predetermined distance for fear of striking structures extended across the road bed, or

the opening in tunnels through which trains have to pass. Due care is also exercised to remove the opening 15 of the cover for any of the counter-currents or eddies formed by the car structure on the air through which the same is moving.

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

10 In a car ventilator having a vertically-disposed tower, the sides of which are open in opposite directions; a hood having a closed top, and a circular side wall pendent therefrom, said side wall being provided
15 with an opening to register with the open-

ings in said tower; a shaft fixedly connected with, to support, said hood, said shaft being disposed concentric with said tower and hood; a hand wheel mounted at an operating station; and transmission mechanism 20 operatively connecting said hand wheel and said shaft.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM L. WALSH.

Witnesses:

E. F. MURDOCK,
JOHN P. DAVIS.