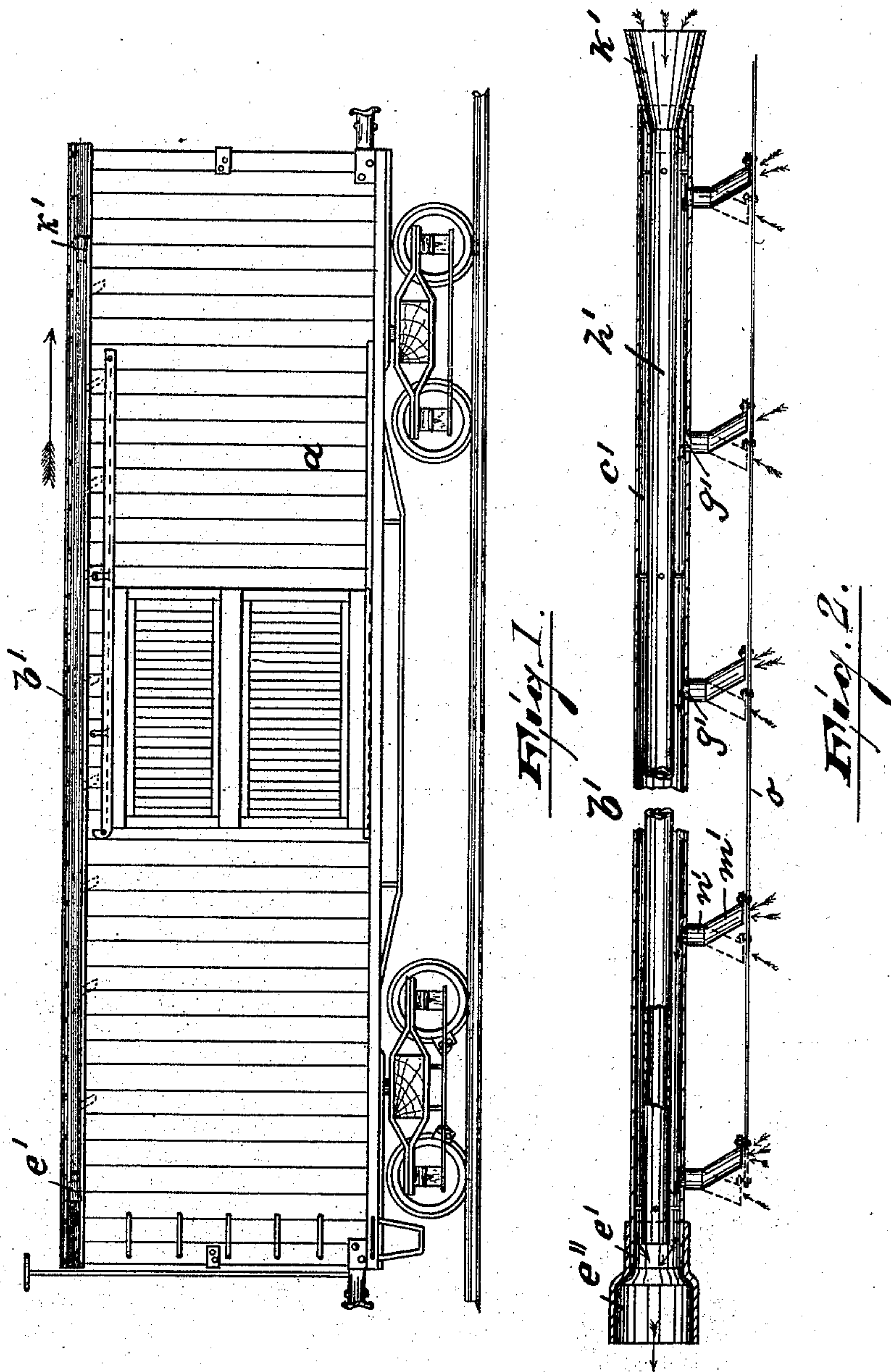


(No Model.)

M. R. RUBLE.  
INDUCTION APPARATUS FOR VENTILATING.

No. 505,231.

Patented Sept. 19, 1893.



WITNESSES:

Wm. D. Bell.  
D. Robertson.

INVENTOR:

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BY

Gartner & Co

ATTORNEYS



# UNITED STATES PATENT OFFICE.

MARTIN ROSE RUBLE, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE RUBLE AMERICAN BLOWER AND INJECTOR COMPANY, OF SAME PLACE.

## INDUCTION APPARATUS FOR VENTILATING.

SPECIFICATION forming part of Letters Patent No. 505,231, dated September 19, 1893.

Application filed August 23, 1892. Serial No. 443,906. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN ROSE RUBLE, a citizen of the United States, residing at Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Induction Apparatus for Ventilating; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention has for its object the ventilation of street and railroad cars, vessels, &c., and relates to such ventilators as are operated by draft or air current, and are simple in construction, durable, reliable and efficient in operation.

The invention consists in the improved ventilator and the combination and arrangement of the various parts, substantially as will be hereinafter more fully described and claimed.

In the drawings Figure 1 is a side elevation of a freight car provided with my improved ventilator; and Fig. 2 is an enlarged detail view of said ventilator.

In said drawings *a* represents the car to the roof or sides of which is secured the ventilator *b'*. The ventilator consists of an outer tube *c'* provided with openings *g'* into the interior of the car through the tubes *n'* and the movable tubes *m'* attached to the ends of said tubes *n'* at an obtuse angle thereto. All of these tubes *m'* are connected together by the rod *o* so that their positions may be changed when the direction in which the car is running is changed as will hereinafter be more fully explained. One end of said tube *c'* communicates directly with the external air.

Within the tube *c'* and extending almost its entire length is arranged the smaller tube *h'* provided at one end with a removable funnel *k'* communicating with the external air. The funnel *k'* is of such construction that when it is placed on either end of the tube *h'* it tightly closes one end of the tube *c'*.

Removably secured to one end of the tube *c'* is a funnel shaped discharge *e'* terminating in the enlargement *c''*.

In operation when the car is running in the direction indicated by the arrow in full lines, the discharge funnel *e'* and inlet funnel *k'* occupy the positions shown in full lines in the drawings. The air current enters pipe *h'* through funnel *k'* and will when leaving said tube *h'* and entering the funnel shaped discharge *e' e''* of tube *c'* produce in said tube *c'* a vacuum or suction whereby foul air is drawn from the car through tubes *m' n'* into said tube *c'* and discharged at the outlet *e'* thereof. The enlargement *e''* at the end of *e'* will in its passage through the air increase the vacuum or suction as will be manifest. If the direction in which the car is traveling be reversed, the funnels *k' e'* are removed and placed on opposite ends of the tubes *h' c'* as indicated by dotted lines in the drawings. The tubes *m'* are at the same time turned by rod *o* at an angle of about one hundred and eighty degrees to the position formerly occupied by them. If desired a blower may be used in connection with the ventilator by simply attaching the inlet funnel *k'* to the outlet tube of said blower.

It is manifest that modifications of my improvement may be made without departing from the spirit of my invention.

Having thus described my invention, what I claim is—

The combination in a car or similar ventilator of an air tube *c'* provided with a series of movable tubes *m' n'* communicating with the interior of the car and having at one end a discharge *e' e''* leading to the exterior of the car, with the tube *h'* incased by said tube *c'* and having at one end a receiving funnel *k'* in communication with the external air and having its other end open and situated near the discharge end *e' e''* of the incasing tube *c'*, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of August, 1892.

MARTIN ROSE RUBLE.

Witnesses:

ALFRED GARTNER,  
WM. D. BELL.