

J. BRIGGS.  
Ventilating Cars and Buildings.

No. 162,616.

Patented April 27, 1875.

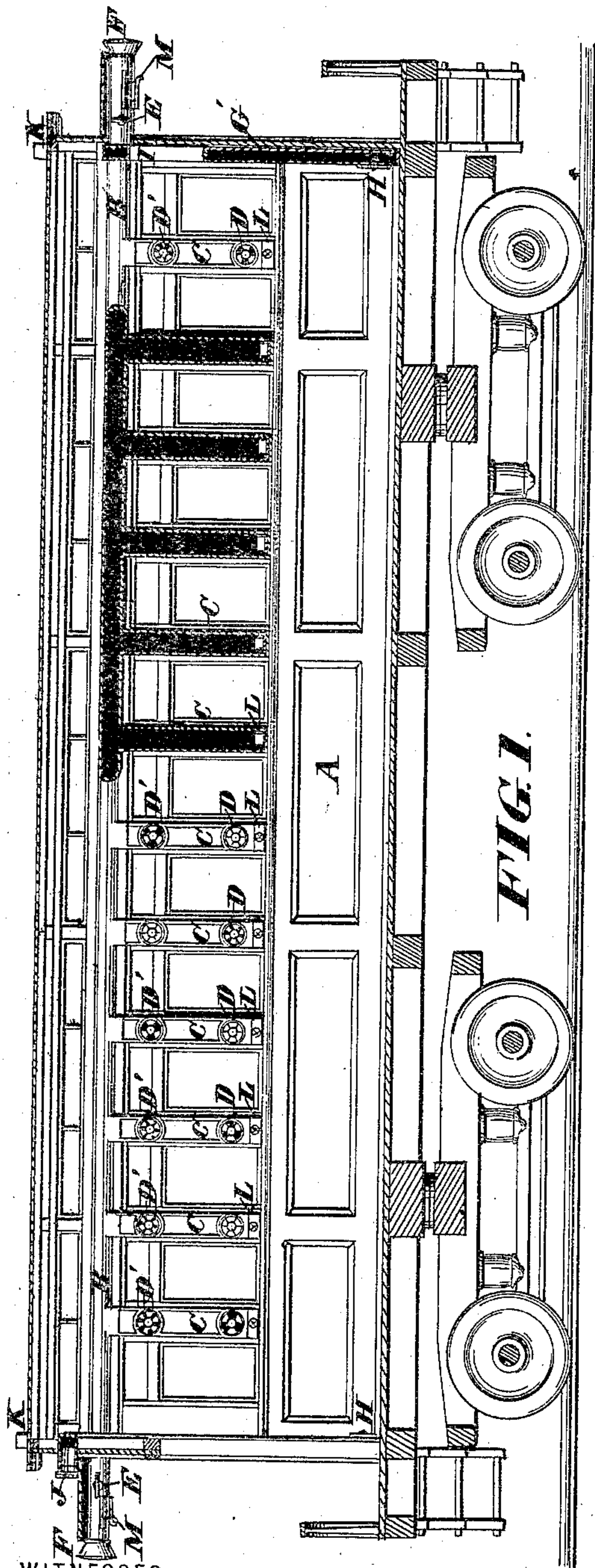
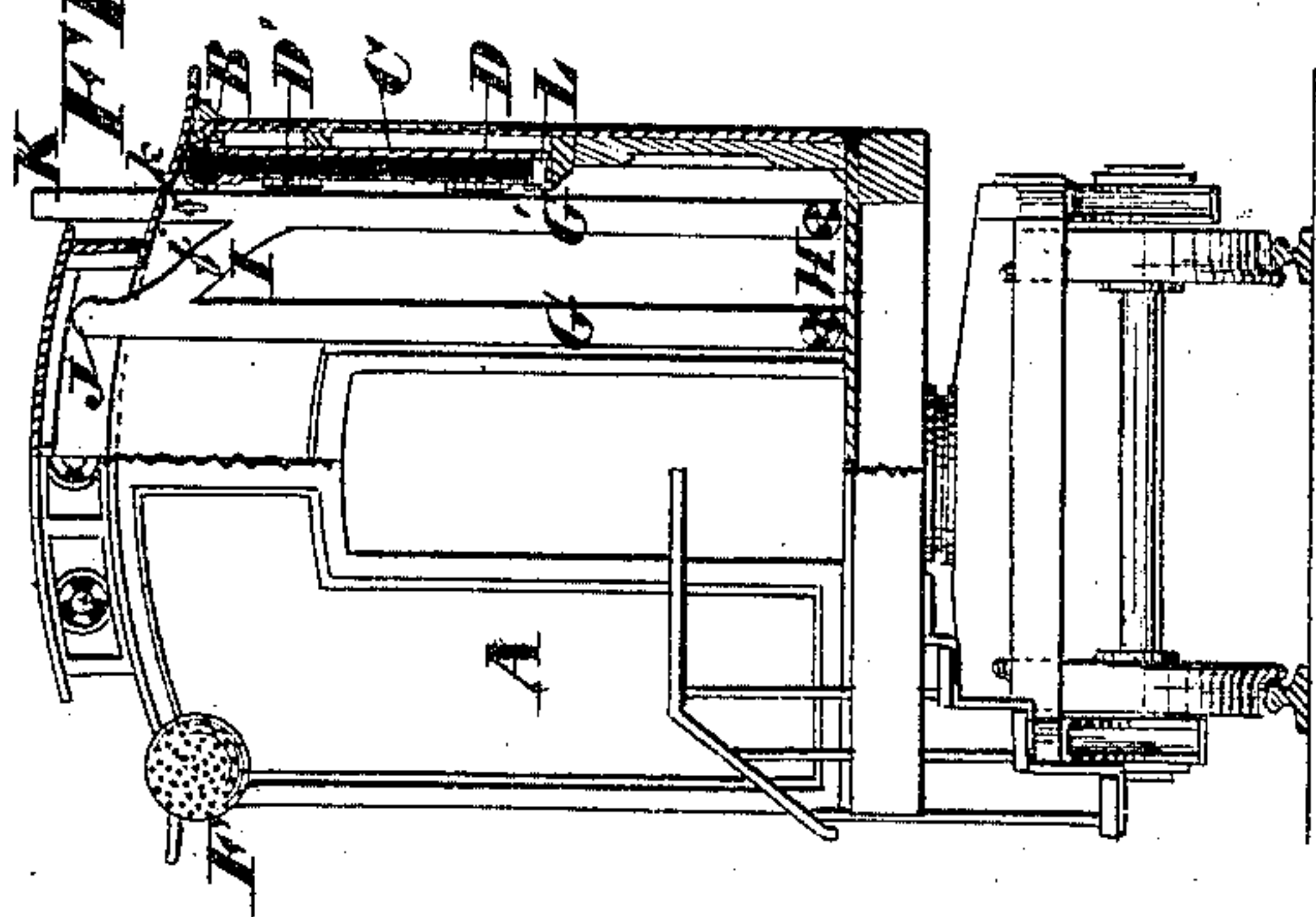


FIG. 1.

FIG. 2.



WITNESSES

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INVENTOR

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# UNITED STATES PATENT OFFICE.

JOHNSON BRIGGS, OF TORONTO, CANADA, ASSIGNOR OF ONE-HALF HIS  
RIGHT TO WILLIAM STANBURY FINCH, OF SAME PLACE.

## IMPROVEMENT IN VENTILATING CARS AND BUILDINGS.

Specification forming part of Letters Patent No. 162,616, dated April 27, 1875; application filed  
February 1, 1875.

*To all whom it may concern:*

Be it known that I, JOHNSON BRIGGS, of the city of Toronto, in the county of York and province of Ontario, Canada, have invented certain new and useful Improvements in Ventilating Cars and Buildings, of which the following is a specification:

The invention relates to a system for ventilating railroad-cars, buildings, &c.; and it consists in the employment of a trunk-pipe, placed horizontally and running the full length of a railway-car, inside or outside, as may be preferred, with protruding funnel-shaped ends to act as air-catches, and connecting to such trunk-pipe a series of branch tubes leading down the sides of the cars to between each seat, the outlets furnished with suitable registers for shutting off and regulating the introduction of fresh air, the object of the invention being to supply the occupants with pure air, and exclude dust and cinders from the car.

In the accompanying drawing, Figure 1 is a longitudinal vertical section, and part in elevation, of my improved system applied to a passenger-car. Fig. 2 is an end view of the same.

A is the body of an ordinary railway-carriage of the usual construction. B is the main air-trunk tube passing longitudinally through the car, either inside or outside, and projecting a suitable distance beyond both ends of the car. C C are a series of any desired number of branch pipes, connecting with the tube B and terminating between the seats or other suitable locality, the outlet being provided with registers D of the usual construction. Preferably the trunk-tubes B are arranged near the ceiling at each longitudinal side of the car, and the branch pipes lead therefrom vertically down the sides of the cars between the windows. The ends of the trunk-tube B are funnel-shaped to form air-catches E to convey the air to the tube, and near the ends of the tube are inserted dampers F. The mouths of the funnels are furnished with a woven-wire covering, or with a covering of any textile fabric having open meshes, to exclude dust and cinders. If desired, the ends of the tube B may be curved, so as to give

elevation to the air catches or funnels above the top of the car.

By means of my invention the occupants of the car can, by opening the registers, obtain a full supply of fresh air without opening the windows, and the ventilation of the car can be easily regulated, without the introduction of dust, cinders, or ashes. The dampers at the rear end of the car should be closed when it is desired to feed the car with a full supply of fresh air, and any degree of ventilation can be obtained by regulating the dampers more or less open at the forward end.

For use in sleeping-coaches the branch pipes C are furnished with additional registers D near the top, so as to ventilate each berth or couch. G G' represent vertical trunks furnished with registers H, and employed for the purpose of conducting off the cold and vitiated air from near the floor, so that its place may be supplied by pure and warm air settling down from above. The vertical trunks G G' may communicate through a branch, I, furnished with a damper, *i.*. When this damper is open the vitiated air carried up through both trunks G G' will be conducted through a horizontal pipe, J, carried through the dome or monitor roof of the car and discharging at the rear end. By opening the damper K the vitiated air will be permitted to pass directly upward through the vertical stack K. A similar arrangement is provided at each side of the car at both ends, one-half of the car being shown in section in Fig. 2, and the other half in elevation, so that the vertical trunks and their accessories on one side are hidden. L L represent trap-doors or slides applied to the lower ends of the branch pipes C for the purpose of removing any accumulation of dust or cinders. M M represent doors or slides applied at or near the extremities of the main trunk B for the same purpose.

My invention is also applicable to buildings and apartments, and the cabins, berths, &c., of steamboats. As applied to buildings, the trunk-tube may be placed either vertically or horizontally through the building, and branch pipes lead therefrom to the rooms to be ventilated.

I claim as my invention—

The trunk-tubes B provided with dampers E, and air-catches F, furnished with a covering of metallic or textile mesh-work, and connecting with a series of branch pipes, C, having suitable registers D, the whole arranged and applied to a car, building,

&c., in the manner and for the purpose set forth.

JOHNSON BRIGGS.

Witnesses:

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