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 VACUUM VENTILATOR FOR RAILWAY CAR TRANSOMS.
 APPLICATION FILED JAN. 13, 1917.

1,289,152.

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Fig. 1.

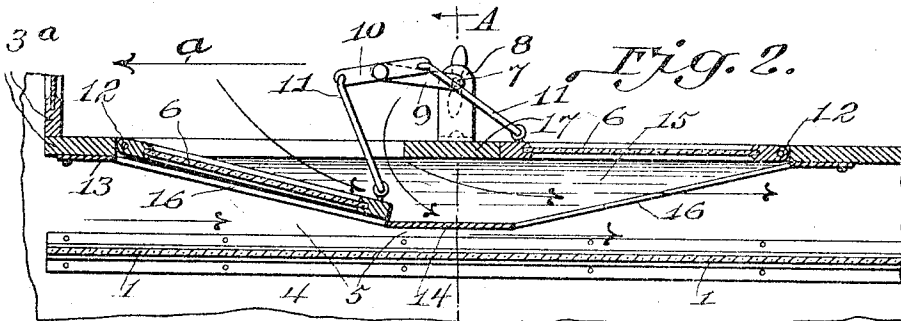
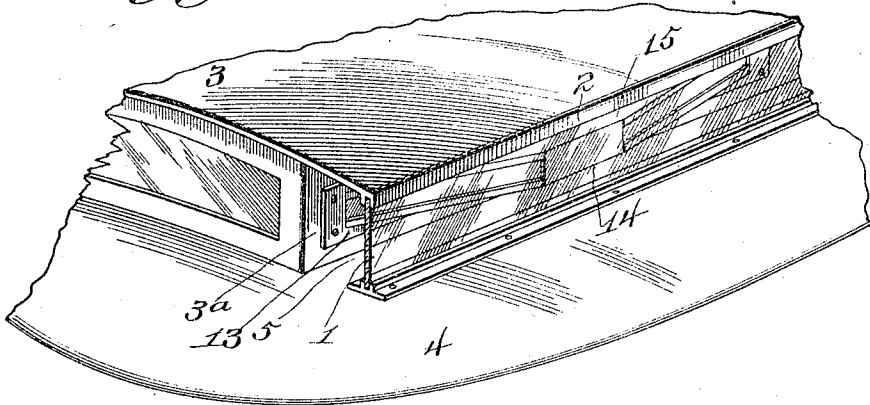
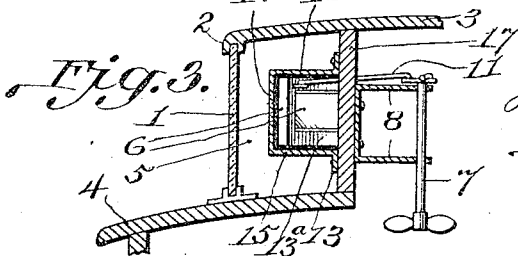
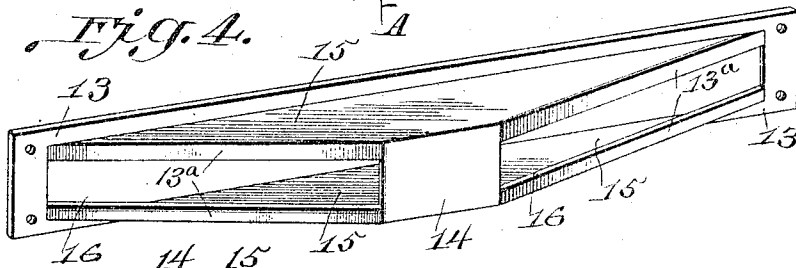


Fig. 4.



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UNITED STATES PATENT OFFICE.

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VACUUM-VENTILATOR FOR RAILWAY-CAR TRANSOMS.

1,289,152.

Specification of Letters Patent.

Patented Dec. 31, 1918.

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To all whom it may concern:

Be it known that we, JACOB W. GERKE, EDWARD J. BRAISTED, and EDMOND T. KELLEHER, citizens of the United States, residing at Flushing, in the county of Queens and State of New York, have invented certain new and useful Improvements in Vacuum-Ventilators for Railway-Car Transoms, of which the following is a specification.

10 This invention relates to car ventilators, and pertains especially to an attachment for passenger car transoms of the usual or well known type.

The object of the invention is to provide 15 means for forming a vacuum opposite the swinging ventilating transoms of passenger cars, so that in operating the transoms in the usual manner, a vacuum is formed upon the outside of the transoms and in communication with the interior of the cars according 20 to the swinging movement given the transoms for ventilation.

A further object of the invention is to provide a transom ventilating device coöperating with hinged or swinging transoms of 25 railway cars for automatically forming a ventilating vacuum simultaneously with the opening of the transoms.

A still further object of the invention is 30 to provide a novel and peculiar vacuum forming element coöperating with swinging transoms of railway cars, said element being fixed to the transom frame and spanning the transoms upon the outside of the frame, and 35 to furnish means for forming an air passage upon the outside of said element and in communication therethrough with the interior of a car when a transom is in open position.

40 A still further object of the invention is to provide a car transom attachment embodying a plurality of vacuum-forming members arranged over and upon the outside of swinging transoms so that the transoms may coöperate in pairs with each of 45 said members by the simultaneous opening and closing of each pair of transoms, whereby a ventilating vacuum is formed by and between the said members and the transoms 50 for the purpose of exhaust ventilation.

In the accompanying drawings forming part of this application:—

Figure 1 is a perspective view of a portion of the transom section of one side of a

car showing the application of the invention. 55

Fig. 2 is a longitudinal sectional view partly broken away and showing the transom of a connected pair in ventilating position. 60

Fig. 3 is a cross section on the line A—A Fig. 2. 60

Fig. 4 is a detail perspective view of one of the attachments embodying this invention. 65

The same reference characters denote the same parts throughout the several views of the drawings. 65

The invention is applicable to the usual swinging or end-hinged transoms of passenger cars without alteration in the transoms or in the usual device for opening and closing them, so that in the application of our invention no changes or alterations are necessary either in the transoms or the device 75 for operating the transoms, but in order to form an air duct or passage on the outside of the transoms and the transom frame, and yet not to obstruct the transom light, we introduce a panel or panels of glass 1, between 80 the ledge 2 of the transom top 3, and the car roof 4. This arrangement forms a longitudinal air duct or passage 5 between the transoms and the glass 1.

A series or plurality of vacuum-forming 85 elements are secured in the air passage 5, one of such elements for each pair of jointly swinging transoms 6, operated by the usual vertical hand rod 7 mounted in a bracket 8 having a crank-arm 9, upon which is pivoted 90 a cross bar 10, connected with the free or swinging end of the transoms by levers 11. The other end of the transoms being hinged at 12. The said elements all being of the same character and purpose, only one of 95 them will be described in detail, the same comprising a skeleton casing having a surrounding base flange 13 secured to the outer face of the transom frame 3^a, a central front plate 14 is connected with the flange 100 13 by side members 15, which have their outer edge 13^a inturned and beveled lengthwise from the plate 14 to and flush with the ends of the flange 13 so as to form a rectangular opening 16 at each end of the plate 14. 105 The plate 14 is opposite the interval or transom frame portion 17 between the transoms of each pair, and said plate is off-set

outwardly by the side members 15, so as to form an air throat when both transoms of a pair are closed. The free end of the transoms are alternately swung against the plate 14 in opening and closing a pair of transoms for exhaust ventilation, and when one or the other transom of a pair of transoms is swung into open position and into engagement with the plate 14, (the other transom of said pair being closed) there is a vacuum formed by reason of the following elements, the opening 16 opposite the closed transom, the transoms, the plate 14, the inclined or beveled side members 15, and the glass panel 1. It being understood that the transoms are set in ventilating position with respect to the forward movement of a car, as indicated by the arrow in the drawings, so that the forward transom of a pair will be in open position and the other transom of said pair will be in closed position.

It will be seen that the plate 14 limits the opening movement of the transoms, and that the inturned edges of the openings 16 are of such angle with respect to the plate 14 and the transom hinge as to form a seat 18 for the transoms in open position, thereby closing this opening and precluding induction of air therethrough.

Obviously the skeleton members may be made in one piece and attached in proper position upon the outside of a transom frame, or they may be made in connected plural sets instead of individuals as shown in the drawings. The essential object in shaping and affixing the skeleton casings is to have the free end of the transoms open against the plate 14, and to have the flanged edges of the openings 16 form a surrounding

seat for the transoms in open position, thereby contributing an essential element in forming a vacuum.

We do not wish to be understood as limiting the application of the invention to any particular cars, or to transoms of any particular size or shape, neither do we wish to confine the invention to any particular material or size, or to the shape or size of the openings in the skeleton casing, but reserve the right to make such changes and variations in the skeleton casing as may be required in its practical application to various transoms, without departing from the invention as covered by the appended claim.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:—

A ventilator attachment for swinging transoms of railway cars, comprising a skeleton casing constituting an open base member adapted to be attached upon the outside of a car and around a pair of transom openings, parallel side members projecting from the base and having inclined edges joined with the base so as to form a pair of openings opposite the transom openings, and a solid plate member off set and parallel with the base and joining the side members centrally opposite the base substantially as set forth.

In witness whereof we hereunto set our hands in the presence of two witnesses.

JACOB W. GERKE.

EDWARD J. BRAISTED.

EDMOND T. KELLEHER.

Witnesses:

P. H. BASSETT,

C. H. ROZEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."