T. E. LINDSEY.

VENTILATOR FOR STOCK CARS.

APPLICATION FILED NOV. 13, 1913.

1,110,447.

Patented Sept. 15, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

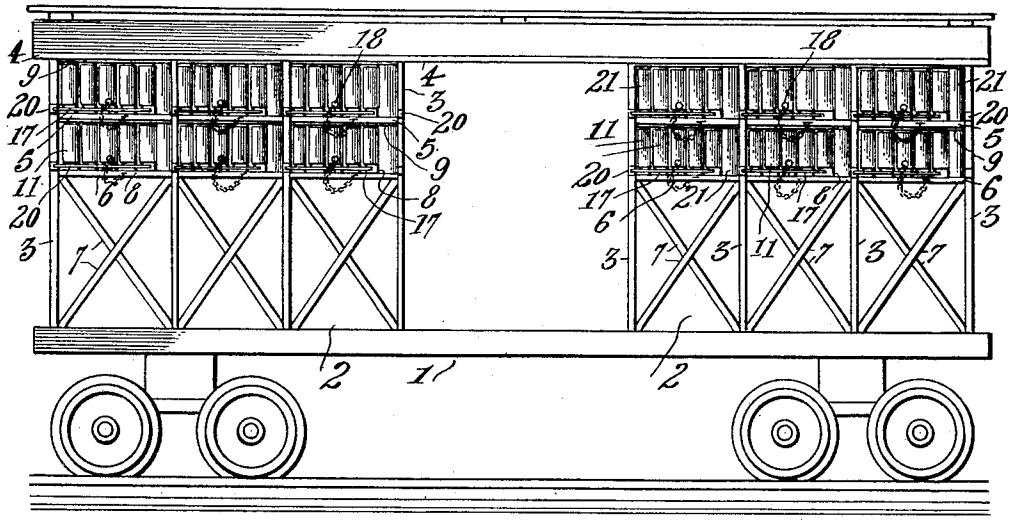


Fig. 2.

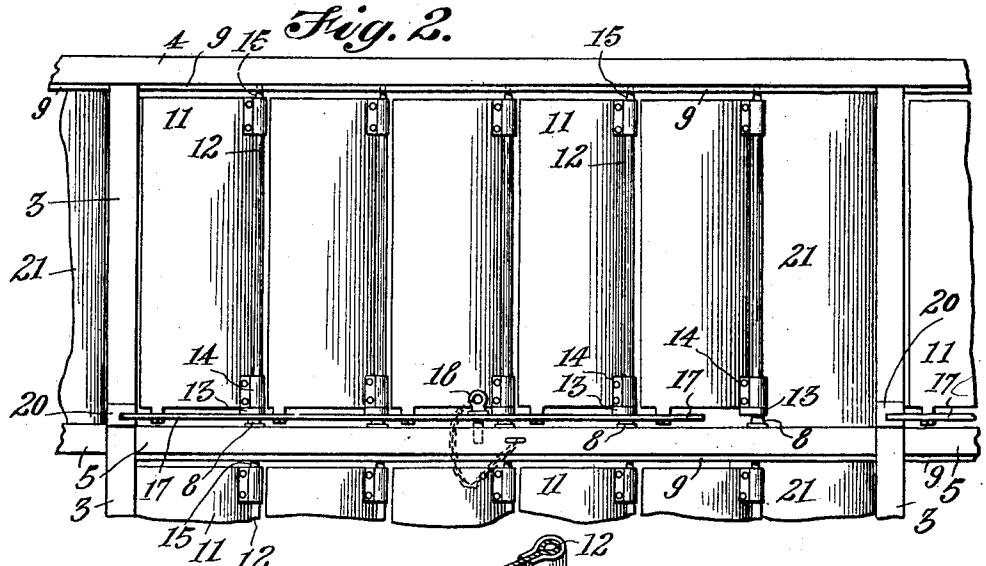
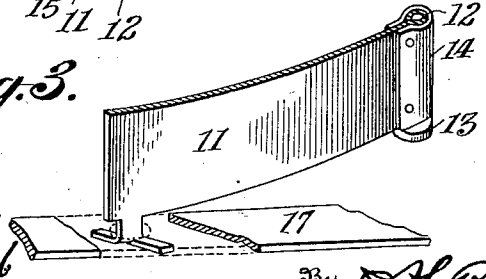


Fig. 3.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

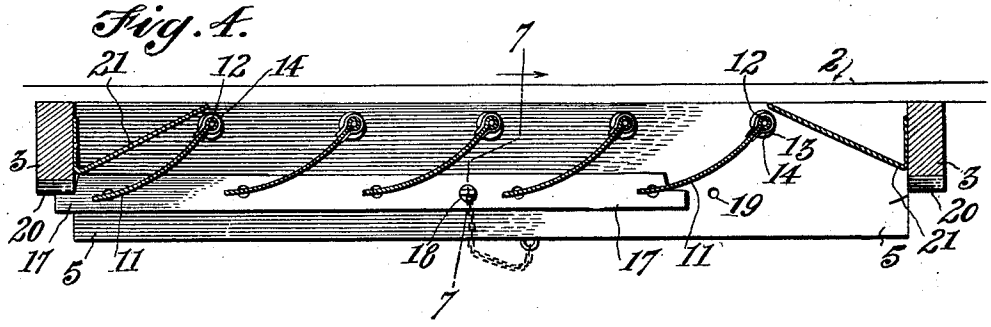


Fig. 5.

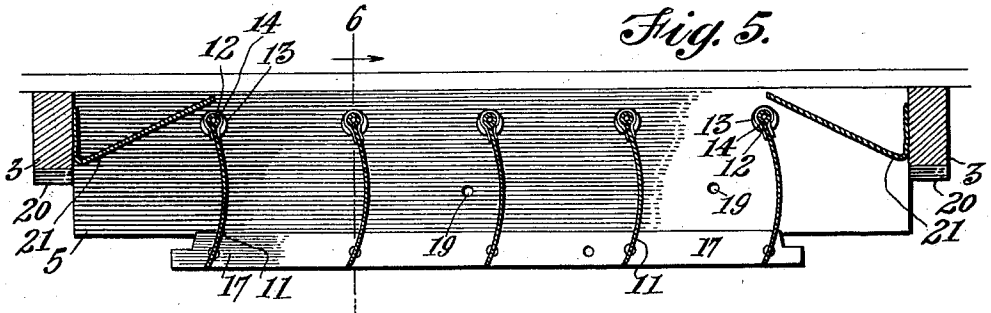


Fig. 6.

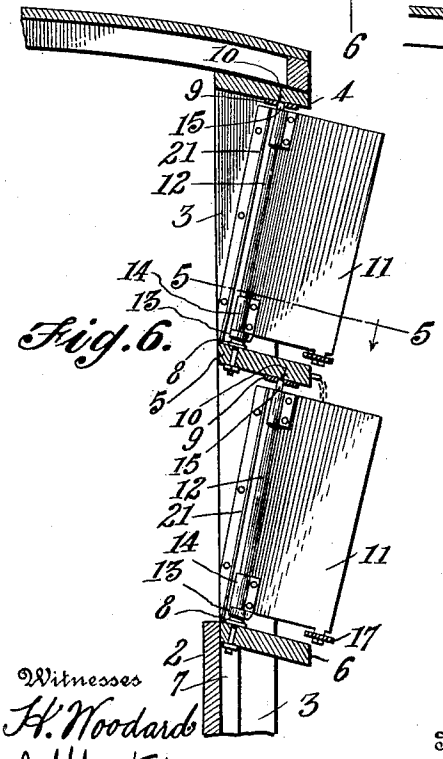
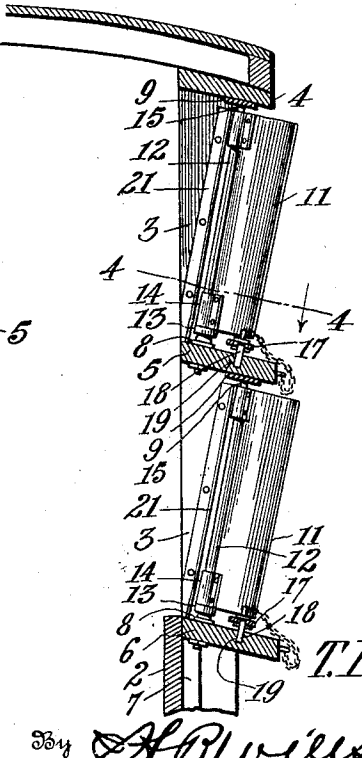


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

TYRE E. LINDSEY, OF ROME, GEORGIA.

VENTILATOR FOR STOCK-CARS.

1,110,447. Specification of Letters Patent. Patented Sept. 15, 1914.

Application filed November 13, 1913. Serial No. 800,838.

To all whom it may concern:

Be it nown that I, TYRE E. LINDSEY, a citizen of the United States, residing at Rome, in the county of Floyd and State of Georgia, have invented certain new and useful Improvements in Ventilators for Stock-Cars; and I do 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.

This invention relates to improvements in ventilators, and more particularly to those adaptable to stock cars.

The primary object of the invention is to provide a ventilator having a plurality of blades or vanes which will be automatically adjusted to exclude winds, rain, snow, and drafts from any direction.

A secondary object is to so position the pivots of the vanes that said vanes will be caused to normally stand in an open position and yet may be easily closed by winds or drafts contacting with them.

With these objects in view, the invention resides in certain novel features of construction and combination herein described and claimed, and shown in the drawings wherein—

Figure 1 is a side view of a stock car showing my improved ventilators applied thereto. Fig. 2 is an enlarged side elevation of one group of the ventilating vanes. Fig. 3 is a detail of a portion of one of the vanes. Figs. 4 and 5 are horizontal sections showing the vanes in different positions; and Figs. 6 and 7 are vertical sections on the lines 6—6 and 7—7 of Figs. 5 and 4 respectively.

In the drawings I have shown a stock car 1 of usual construction with the exception that the usual battens above the closed portion 2 of the sides are omitted and in their place my improved ventilators are employed.

Coming now more particularly to details, the usual posts or studding 3 rising from the sill of the car are provided on their upper ends with the ordinary longitudinal roof supporting bars 4 and with intermediate bars 5 and 6. The studding 3 are preferably, though not necessarily braced as at 7.

The bars 5 and 6 incline downwardly from their inner to their outer edges in order to prevent any water which may fall thereon from running into the car. The upper surfaces of these bars 5 and 6 carry bearing studs 8, while the lower sides of the bars 4 and 5 carry longitudinal plates 9 provided with bearing apertures 10. By reference to the drawings it will be seen that the bearing plates 9 are secured to the lower sides of the bars 4 and 5 at points comparatively near their outer edges, while the studs 8 on the upper surfaces of the bars 5 and 6 are rather near the inner edges of said bars. By thus positioning the studs 8 and the bearing plates 9, the pivotal axes of vanes, yet to be described, will be disposed at an angle to the vertical plane of the side of the car 1. The above-mentioned vanes or blades are in the form of rectangular plates 11 each having a bead 12 along its inner edge to reinforce the same, and upper and lower pivot members adapted to coact with the bearings 10 and the studs 8 in a manner to be described.

Each lower pivot member is in the form of a cup bearing or socket 13 having its upper portion 14 bent around and embracing the bead 12 and secured in position on the plate 11 by rivets or other suitable fastenings, while each upper pivot is secured to the plate 11 in the same manner as the bearing 13 and is in the form of a stud 15.

The studs 15 are adapted to engage the bearing openings 10 in the plate 9 and the cup bearings 13 are adapted to seat over the studs 8 in the bars 5 and 6 and when in this position, as seen in the drawings and as hereinbefore mentioned, the pivot axes of the plates 11 will be offset from the vertical plane of the sides of the car 1, thus causing said plates or vanes 11 to stand normally at right angles to the sides of said car.

In order that the vanes 11 in each series may be actuated simultaneously, I preferably connect them at their lower edges with a link 17, which, if desired may be of considerable weight. Each link 17, when the vanes are swung to either side, rests above the bar 5 or 6 as the case may be and when in either of these positions a pin 18 may be inserted through an opening in the link 17 and into either of properly positioned sockets 19 in the bar 5 or 6 thus locking the vanes in closed position. When in either

of the above-mentioned positions, the ends of the links 17 are adapted to contact with bumpers 20 carried by the studding 3.

The entire ventilator as set up is adapted to be closed by a wind or by a draft caused by the rapid movement of the car and it will be obvious that when the car is standing still, if there is no wind, the disposition of the pivots of the vanes 11 will cause them to remain in an open position. When in this position if the vanes were flat, and a wind should blow directly against the edges thereof, they probably would not close and would allow a draft to pass through the car. In order to obviate the possibility of their not working under these conditions, I bend each vane transversely as clearly shown in the horizontal sectional views so that a cam surface will be provided on which the wind may act to close said vanes 11.

Since a space would be left at either end of the vanes 11 when said vanes are swung to the right or left and said space would permit a draft through the car, I provide inclined plates 21 carried by the studding 3, said plates substantially filling said open spaces.

Although I have described my invention with considerable minuteness I do not wish to be limited thereto unduly. I do desire, however, to employ the specific form of cup bearings described for the bottoms of the vanes, as they effectually exclude water, snow, or the like from the bottom pivot and insure the proper operation thereof.

What is claimed as new is;

1. In a device of the character described, a frame comprising vertical posts and longitudinal bars, and a plurality of vanes pivoted at their rear edges to said longitudinal bars, the pivotal axes of said vanes being disposed at an angle to the vertical plane of said frame.

2. In a device of the character described, a frame comprising vertical posts and longitudinal bars, a plurality of transversely curved rectangular vanes pivoted at their inner corners between said longitudinal bars, the pivotal axes of said vanes being disposed at an angle to the vertical plane of said frame.

3. In a device of the character described, a frame comprising vertical posts, and longitudinal bars, rectangular vanes pivoted at their inner corners between said longitudinal bars, and a connecting link pivotally mounted on said vanes for simultaneously actuating the same, the pivotal axes of said vanes being disposed at an angle to the vertical plane of said frame.

4. In a device of the character described, a frame comprising vertical posts and longitudinal bars, rectangular vanes pivoted at their inner corners between said longitudinal bars, and a weighted connecting link pivoted to said vanes for simultaneously actuating the same, the pivotal line of said vanes being disposed at an angle to the vertical plane of said frame, whereby said weighted link will cause said vanes to normally stand at right angles to said frame.

5. In a device of the character described, a frame comprising vertical bars, longitudinal bottom and top bars, and an intermediate bar, pivot studs carried by the upper sides of said bottom and intermediate bars near their inner edges, bearings carried by the lower sides of said top and intermediate bars near their outer edges, a plurality of vanes having bearing studs on the inner corners of their upper ends, and cup bearings on the inner corners of their lower ends, said cup bearings resting on the pivot studs of said bottom and intermediate bars, and the pivot studs on said vanes resting within the socket bearings in the lower sides of said top and intermediate bars, the disposition of said bearings and studs causing the vanes to normally stand at right angles to said frame.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

TYRE E. LINDSEY.

Witnesses:
B. F. TOLBERT,
W. H. BEST, Jr.

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