J. J. W. TAYLOR.

Cinder-Warders for Railway-Cars.

No. 168,681. Patented Oct. 11, 1875.

Fig. 1.

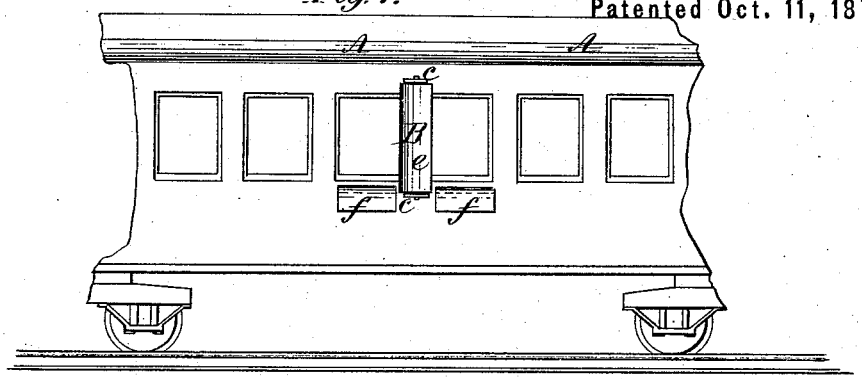


Fig. 2.

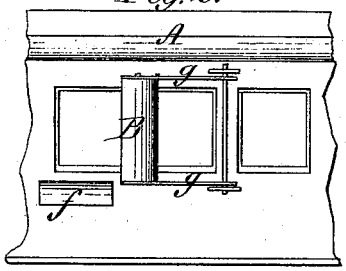


Fig. 3

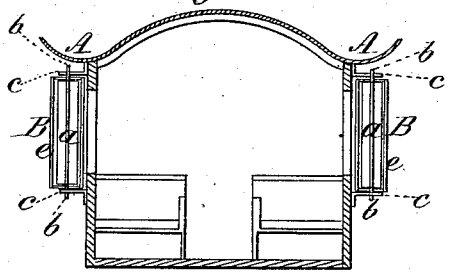


Fig. 4.

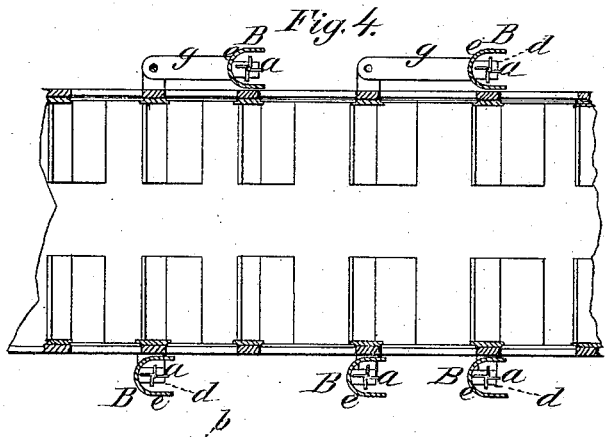
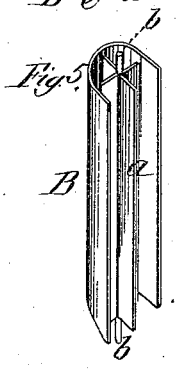


Fig. 5.



Witnesses:

J. West Wagner

Mary E. Elliott

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UNITED STATES PATENT OFFICE.

JAMES J. W. TAYLOR, OF HAVRE DE GRACE, MARYLAND.

IMPROVEMENT IN CINDER-WARDERS FOR RAILWAY-CARS.

Specification forming part of Letters Patent No. **168,681**, dated October 11, 1875; application filed September 21, 1875.

To all whom it may concern:

Be it known that I, JAMES J. W. TAYLOR, of Havre de Grace, in the county of Hartford and State of Maryland, have invented certain new and useful Improvements in Cinder-Warder for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to prevent the great annoyance and frequent agony which passengers in railroad-cars suffer from the cinders, smoke, and dust which pour in at the car-windows, befouling the garments and linen, and injuring the eyes.

To properly effect my object, I construct the car-roof with upwardly-curving eaves, to form a trough for collecting cinders, &c.; or, in case the car be already built, I place collecting-troughs over each eave to perform this function. In this trough the cinders and smoke-dust collect, and occasionally the wind or draft precipitates it over the edges of the troughs.

The cinders and dust would naturally be drawn into the car-windows; but such an undesirable result is prevented by the employment of whirling fans, having their rear and sides inclosed by fenders, which collect the ashes, which is, in turn, thrown to the ground by the fans, any tendency to rise again being prevented by fenders projecting from the side of the car below the windows in front and in rear of each whirling fan.

These fans are so constructed as to face toward the locomotive at all times, as will be hereafter described; and one warder for every two windows is deemed sufficient, although, if desired, there may be one for every window.

In the accompanying drawings, Figure 1 represents a side elevation of a portion of a railroad-car embracing my warder for cinders and smoke-dust; Fig. 2, a partial elevation of a car, showing a modification of the manner of attaching the warders; Fig. 3, a vertical section; Fig. 4, a horizontal section, and Fig. 5 a view of one of the cinder-catching devices and its case.

The roof of the car has its eaves curved upward, so as to form a trough, A, one trough upon each side of the car; or, should the cars be already built, a similar curved trough, of tin or other suitable material, may be properly secured to the car-roof.

At intervals, the dust, ashes, and cinders which accumulate in the troughs A will be thrown over the edges of the troughs in puffs, when they are caught by the warders and thrown below the windows. These warders B are, preferably, placed one for every two windows; and each consists of a whirling fan, *a*, the journals *b* of which rotate in bearings *c*, which project from the side of the car about five or six inches, just above and below the car-windows. Pivoted upon the same journals *b*, by suitable connections *d*, is an apron or fender, *e*, which surrounds three sides of the fan. The fender *e* is turned upon its pivot, so as to present its concave or open side to the front or locomotive end of the train, and arrest the ashes, cinders, &c., as they are forced out of the trough A in a downwardly angular line, caused by the draft of the rapidly-moving train. The vanes of the fan *a* are so arranged with respect to their axis that there shall be no dead-point; but they receive the wind, or are whirled by the draft of the moving train. The whirling of the fans *a* drives the ashes, &c., which are beating against the fender, downwardly and out at the bottom of the warders B below the windows. Any possible upward blowing of the ashes thus discharged is prevented by fenders *f f*, projecting from the sides of the car upon each side of and close up to the warder B.

It is obvious that the cinder-warder B, instead of being rotatable from projections, as above described, may be swung out from hinged arms *g*, as shown in Fig. 2 of the drawings.

I claim—

1. In a cinder-warder for railroad-cars, the whirling fan *a*, in combination with its partially-inclosing fender-case *e*, as and for the purpose described.

2. In a cinder-warder for railroad-cars, the

combination of the whirling fan *a*, its case-fender *e*, and fenders *f f*, as and for the purpose described.

3. The cinder-collecting troughs A over the line of window-whirls, as and for the purpose described.

In testimony that I claim the foregoing I have affixed my signature in presence of two witnesses.

JAMES J. W. TAYLOR.

Witnesses:
C. H. SLICER,
J. V. THOMPSON.