E. C. Salisbury.

Car Ventilator.

No. 13,364. Patented July 31, 1855.

Fig: 1.

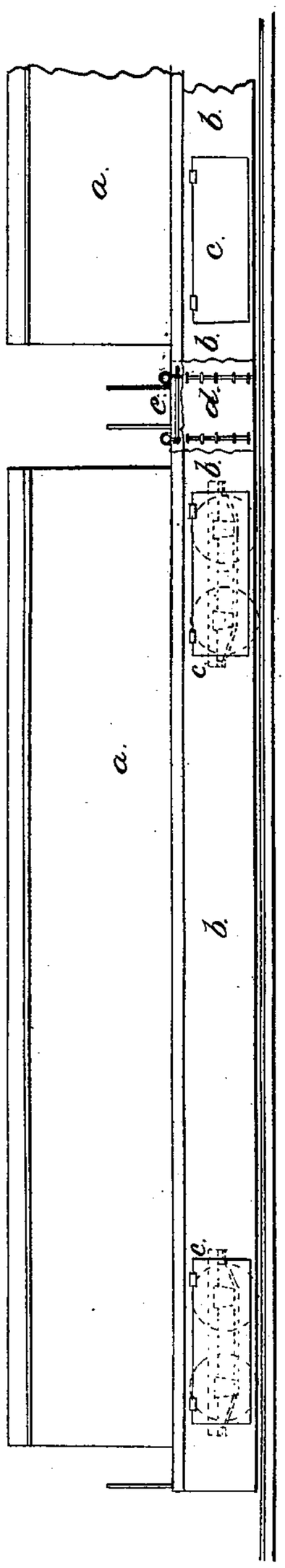


Fig: 2.

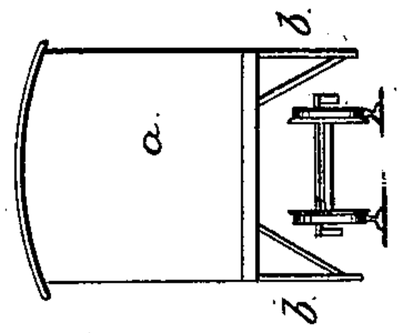


Fig: 3.

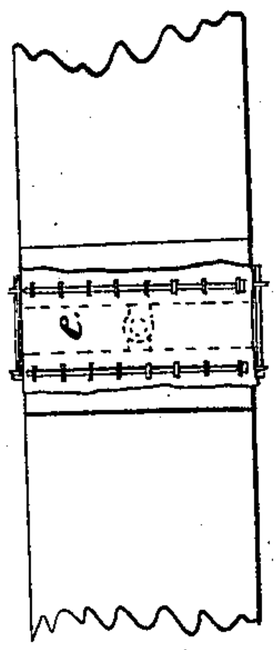
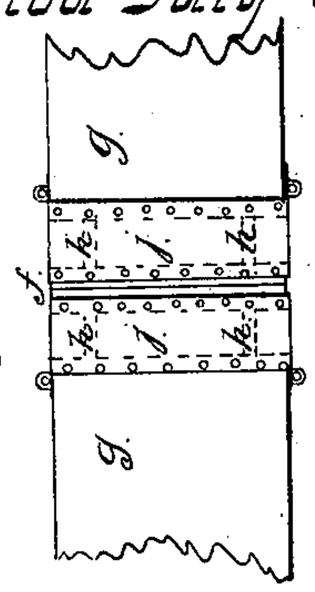


Fig: 4.

Fig: 5.



Witnesses:

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Inventor:

Elam C. Salisbury

UNITED STATES PATENT OFFICE.

ELAM C. SALISBURY, OF NEW YORK, N. Y.

IMPROVEMENT IN EXCLUDING DUST FROM RAILWAY-CARS.

Specification forming part of Letters Patent No. **13,364**, dated July 31, 1855.

To all whom it may concern:

Be it known that I, ELAM C. SALISBURY, of the city, county, and State of New York, have invented a new and useful Improvement in Railroad-Trains to Prevent the Dust which is Agitated and Thrown Up by the Passage of the Trains over the Road from Rising into the Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of a train of cars with my improvement attached thereto; Fig. 2, an end elevation thereof; Fig. 3, a plan representing the manner of closing up the space between the platforms of two contiguous cars. Fig. 4 is a longitudinal vertical section of a modification, and Fig. 5 a plan of the said modification.

The same letters indicate like parts in all the figures.

My invention consists in forming a continuous tunnel or passage from end to end of a railroad-train by inclosing the sides thereof from the bottom of the cars to within a short distance of the track, and also the spaces between the platforms, leaving such tunnel or passage open at each end, so that the dust which is agitated and thrown up from the track by the motion of the train shall be kept down below the bottom of the cars and escape at the rear end of the train, thus effectually preventing such dust from rising and entering the windows, doors, and other apertures of the cars.

The accompanying drawings represent two cars fitted upon my improved plan, this number being deemed sufficient to exhibit my said invention, as any number of cars can be fitted up and connected in like manner.

In the said drawings, *a a* represent the cars constructed and coupled in the usual manner, with the space between the bottom and the track inclosed at the sides *b b* with sheet metal or plank, or canvas stretched on and properly secured to frames or other suitable material properly secured to the car-bodies. These sides should extend down to within a few inches of the track, so as not to strike against any portion of the track or any of its appendages. Opposite the trucks of each car these sides are cut out and the openings provided with flaps *c*, connected at their upper edges by hinges and secured by suitable catches, so that by lifting them up access can be had to the trucks and wheels for inspection, supplying oil to the journal-boxes, and for all other required purposes. These sides should be at such distance apart as to allow necessary room for the free lateral vibration of the trucks in passing curves, switches, &c.; but if desired the flaps may be so constructed that they will be turned by the lateral vibration of the trucks by hinging the upper edge of each flap to a bar or plate connected with the bottom of the car by a bolt or equivalent therefor, on which the said bar can turn horizontally, so that when the trucks vibrate and strike against the flaps they (the flaps) with the bars or plates to which they are hinged will yield to the required extent, and when the trucks return to their original position the plates with the hinged flaps will be drawn back to their original position by the tension of springs. It should be observed that this provision for lateral vibration will not be required except for turning short street curves, as the width of the cars as usually made will always leave ample space for the lateral vibration of the trucks between the sides; or the sides may be made with recesses on the inside sufficient in depth to allow the required play for the vibration of the trucks on the shortest street curves. The ends of the sides *b b* at the junction of any two cars are connected by aprons *d*, made of india-rubber cloth, or canvas, or other flexible or yielding material, the edges of which are secured to the ends of the sides by making loops near the edge of the cloth, which pass over staples on the sides and there secured by a rod passing through the staples; or this may be done by hooks or buttons, the flexibility of the aprons being sufficient to yield freely as the cars turn curves or approach and recede from each other in starting and stopping a train. The space between the platforms of the several cars, where two of them are coupled together, may be inclosed in like manner by an apron *e*, secured to the two platforms in like manner, the apron being connected so loose and being made so flexible as to allow the required extent of play between the cars for starting, stopping, and turning curves. Instead of these aprons the same end may be accomplished by means of an auxiliary platform *f*, connected with the main platform *g* by means of rods *h h* secured to the auxiliary platforms and sliding in holes in

the main platforms to allow them to slide in and out, springs *i i* being applied to the auxiliary platforms, the tension of which will force them toward each other. Strips of canvas *j j*, or other flexible substance, are then to be secured by one edge to each of the main platforms and by the other edge to the auxiliary platform. They should be made of sufficient length to allow the required play between the cars. When two cars are coupled together, the outer edges of the two auxiliary platforms will be kept in contact by the tension of the springs, which will allow them to play in and out and to vibrate as the train starts or stops or passes around curves. In this way I form a tunnel or passage along the entire length of the train, which will be open at each end and closed at the top and sides, except the narrow spaces between the lower edge of the sides and the track, so that the dust which is agitated and thrown up by the passage of the train will be prevented from rising up into the cars, and a current will be induced through this passage by the resistance of the air at the forward end, which will discharge the dust at the rear end.

I do not wish to limit myself to any special mode of inclosing the sides of the cars or connecting the sides at the junction of the several cars of a train, nor of inclosing the space between the platforms at the junction of the several cars, as these separately make no part of my invention, and they may be variously modified within the range of my invention; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

The method, substantially as herein specified, of preventing the dust which is agitated and thrown upon the track by the passage of a train from rising up and entering the doors, windows, and other apertures of cars by inclosing the sides of the train from the bottom of the cars to within a short distance of the track and closing up the spaces between the platforms of the several cars, substantially as and for the purpose specified.

ELAM C. SALISBURY.

Witnesses:
WM. H. BISHOP,
ANDREW DE LACY.