J B Bausman,

Car Ventilator.

No 31,943. Patented Apr 9, 1861.

Fig: 1.

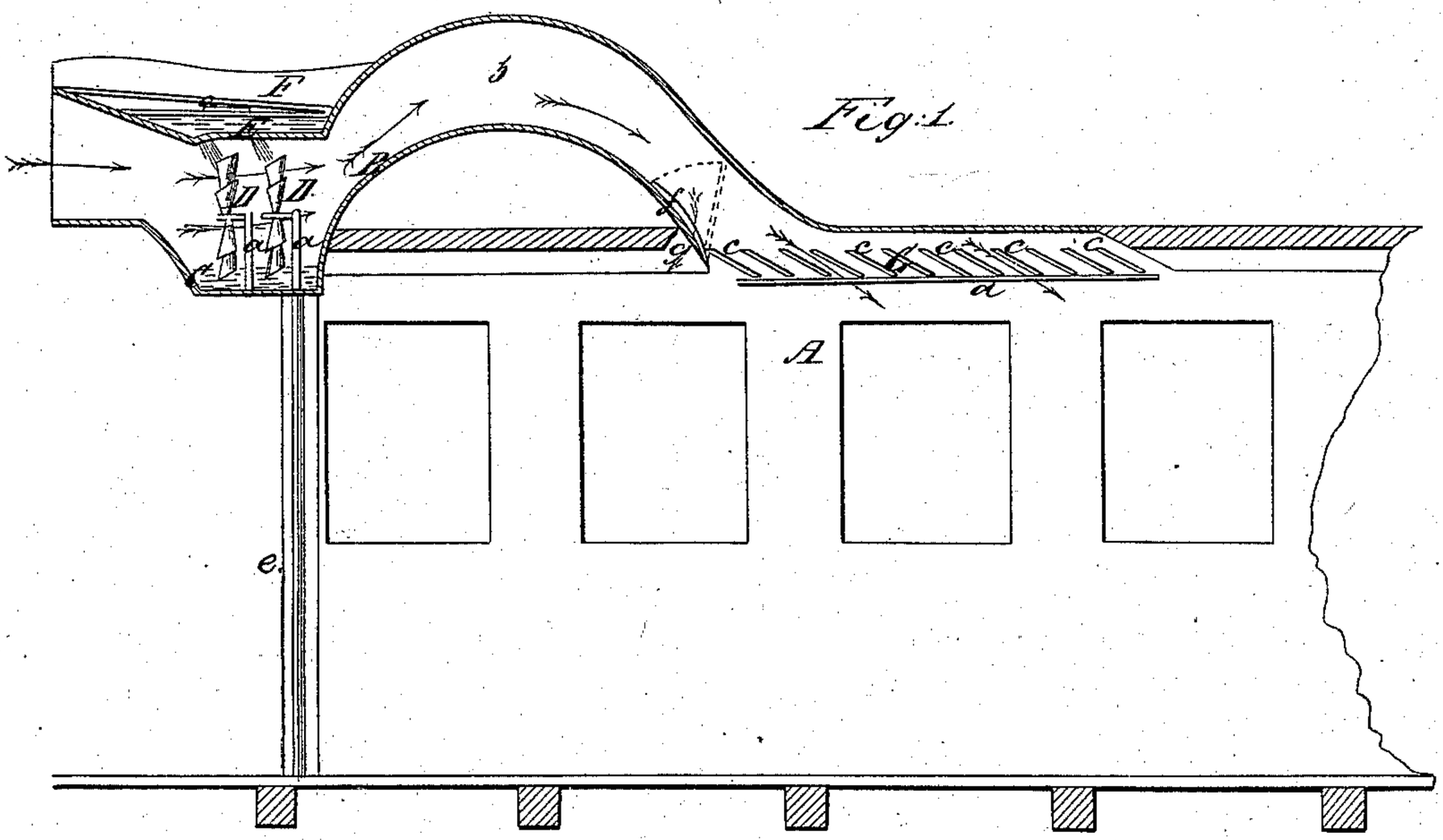
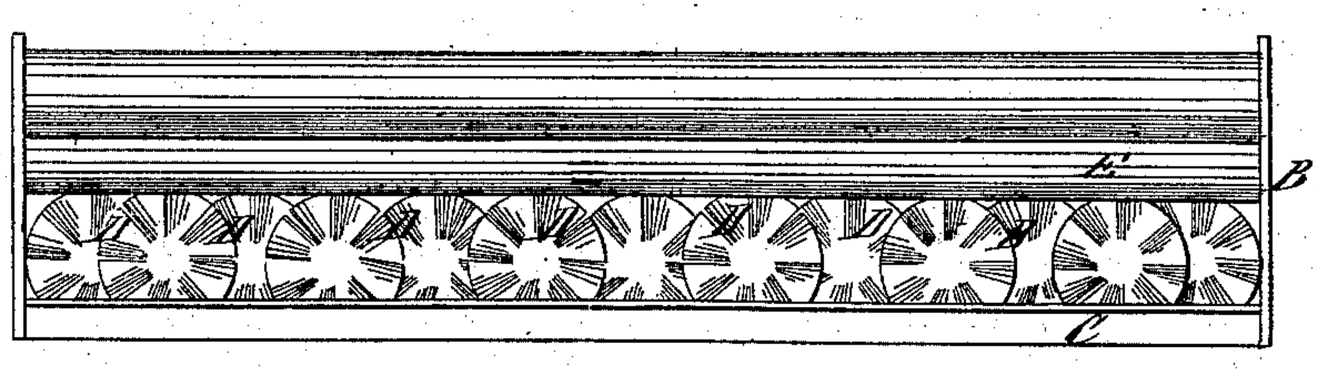


Fig: 2



Witnesses.

J W Coombs
R. S. Spencer

Inventor
J B Bausman
per Munn & Co
attorneys

UNITED STATES PATENT OFFICE.

J. B. BAUSMAN, OF ROCHESTER, PENNSYLVANIA.

CAR-VENTILATOR.

Specification of Letters Patent No. 31,943, dated April 9, 1861.

To all whom it may concern:

Be it known that I, J. B. BAUSMAN, of Rochester, in the county of Beaver and State of Pennsylvania, have invented a new and Improved Railroad-Car Ventilator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side sectional view of a car with my invention applied to it. Fig. 2, is a detached front view of my invention.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to supply rail-road cars while in motion or during their course of travel, with pure air or air deprived of dust and light impurities which are thrown up by the motion of the car.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents the body of a rail-road car which may be of the usual or any proper construction. On the top of the car A, a trunk or box B, is placed. This trunk or box extends the whole width of the car and it has near its orifice a depression extending its whole width and which forms a water-chamber C, as shown clearly in Fig. 1. In this water chamber C, uprights *a*, are placed which uprights form supports for fans D, that are set in motion by the resistance of the air as the car moves along, it being understood that the trunk or box B, faces the direction in which the car is moving and consequently there is a trunk or box at each end of the car or two placed thereon facing in opposite directions. On the top of the trunk or box B, and directly over the fans there is a water chamber E, the bottom of which is perforated to admit jets of water on the fans D. The top of the water-chamber E, is provided with a valve *a*, which may be closed when the discharge from the chamber E, is not required. F, is a lid which fits over the box E. The trunk or box B, directly back of the fans D, is curved as shown plainly at *b*, in Fig. 1, and the back end of the trunk or box communicates with the interior of the car through a register G, as shown also in Fig. 1. This register G, may be constructed similarly to a window blind, pivoted slats *c*, being connected to a rod *d*. This register may be formed in sections if desired so that the air may be admitted into the car at different points. The volume of air admitted into the car may be regulated by adjusting the slats of the register G.

The operation is as follows:—As the car moves along the fans D, will be rotated by the resistance of the air and the drip or jets of water from the chamber E, will be scattered or formed into spray which will be increased by the action of the fans on the water in the chamber C, into which the fans D, dip slightly. The chamber C, it will be understood is supplied from the chamber E, and chamber C may be provided with a suitable overflow or waste pipe. The air in passing through the trunk B, will pass through a spray and the latter will remove all dust from the air, the dust settling down into chamber C, which may be cleansed when necessary by means of a pipe *e*. The trunk or box B, is curved or made of sinuous form in order to prevent any mist or vapor passing into the car, the mist thereby instead of passing directly into the car being allowed time to condense and pass back into the chamber C.

During winter or cold weather when stoves are required the trunk or box B, may at its inner end communicate with an air-heating device connected with the stove and arranged in any suitable way to admit of being ejected into the car in a heated state. The inner part of the trunk or box may be provided with a valve *f*, by adjusting which the air may be made to pass directly into the car or into the air-heating device through a passage *g*.

By this invention the air in passing through the trunk B, is subjected to a spray or mist that will fully abstract the dust from it, the result being due to the two water chambers and the fans arranged relatively with each other as shown. The air also will enter the car in a dry state or will not be over loaded with moisture which would occur if it were allowed to pass directly into the car. The sinuous form of the trunk or box prevents the moisture passing into the car as it collects before reaching the top of the incline and falls back into the chamber C. By closing the valve *a*, the discharge of water from E, may be stopped at any time and the waste of water prevented.

I am aware that rotating fans or wheels have been used and arranged to work in

water-chambers to produce a spray or mist to abstract dust from air as the latter enters a car and I do not claim such device broadly or in the abstract, but,

I do claim as new and desire to secure by Letters Patent,

The arrangement of the self acting fans D with the tanks C, E, and curved trunk B, in the manner and for the purposes herein shown and described.

J. B. BAUSMAN.

Witnesses:

BENJAMIN BRYANT,

A. BAUSMAN.