

(No Model.)

A. MILLER.
VENTILATING FREIGHT CARS.

No. 344,848.

Patented July 6, 1886.

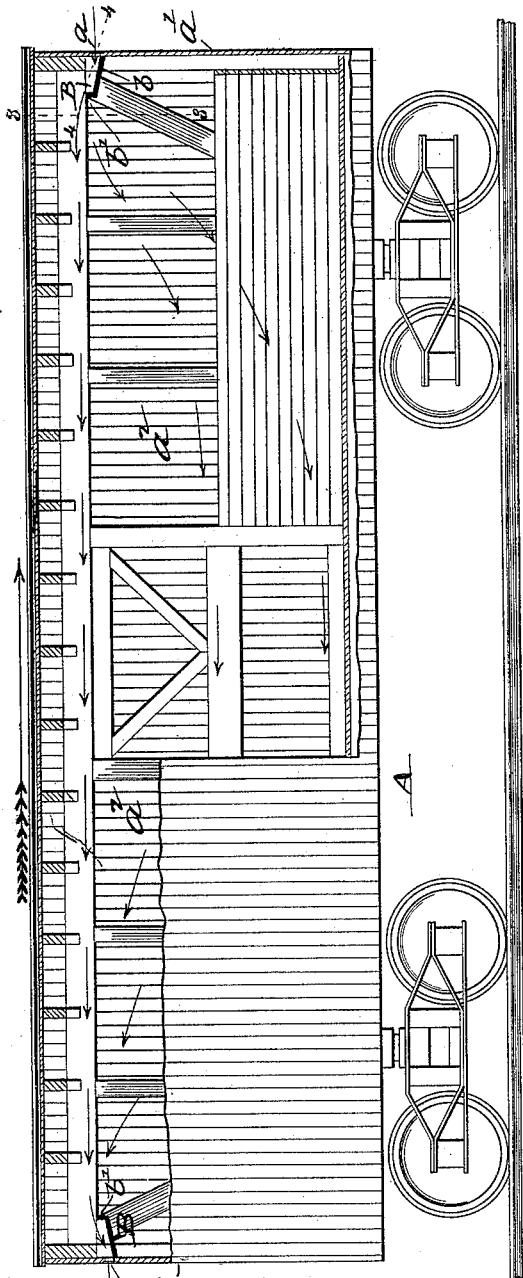


Fig. 1.

Attest:
J.W. Hoke.
F.L. Stoddard

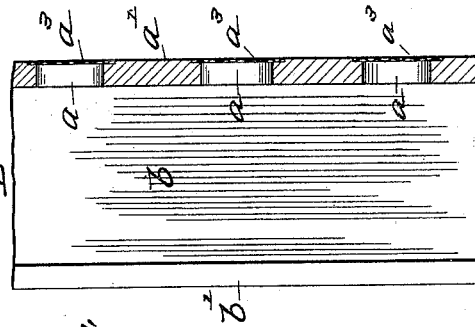
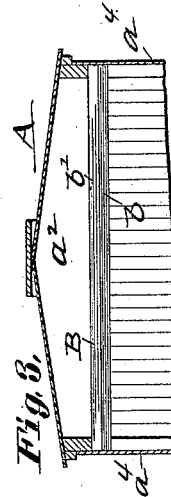
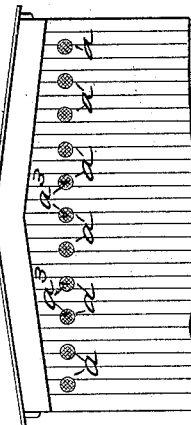


Fig. 2.

Fig. 4.



Inventor:
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UNITED STATES PATENT OFFICE.

AUGUST MILLER, OF ST. LOUIS, MISSOURI.

VENTILATING FREIGHT-CARS.

SPECIFICATION forming part of Letters Patent No. 344,848, dated July 6, 1886.

Application filed August 31, 1885. Serial No. 175,695. (No model.)

To all whom it may concern:

Be it known that I, AUGUST MILLER, of St. Louis, Missouri, have made a new and useful Improvement in Freight-Cars, of which the following is a full, clear, and exact description.

The improvement relates to the ventilation of freight-cars, and more especially to that class of freight-cars which are used in the transportation of grain and other commodities that are liable to injury from confinement in an unventilated car.

It consists in perforating or constructing the car at its ends or sides in such manner as to admit the outer air and discharge the inner air, and at the same time prevent cinders and moisture from passing into the interior of the car.

The drawing hereto annexed and making part of this specification illustrates the application of the improvement.

Figure 1 is a longitudinal sectional elevation of a freight-car having the improvement. Fig. 2 is an end elevation of the upper end of the car. Fig. 3 is a vertical cross-section on the line 3 3 of Fig. 1; and Fig. 4 is a detail, being a section, upon an enlarged scale, on the line 4 4 of Fig. 1.

The same letters of reference denote the same parts.

The car A, saving as it is modified by the improvement in question, is of the usual form. The air is admitted into the car by means of several perforations, *a a*, in preference to a single opening. The perforations are arranged in the upright end *a'* of the car, in the upper part thereof, to enable the air to pass into the upper part of the interior *a''* of the car. Each of the perforations *a* is guarded by a screen, *a''*, preferably of wire-gauze, so as to admit the air, but to exclude cinders, and to prevent moisture from entering to any great extent or in large currents. It is, however, important to prevent moisture to any extent practically from passing into the interior *a''*, where the merchandise being transported is placed. To this end a part, which may be termed an "apron," B, is introduced into the car, which serves partly to arrest such moisture as may penetrate through the perforations *a*, and prevent it from passing onward into the interior *a''*, and also to collect it and return it back-

ward through the perforations *a* again, or some other suitable outlet. At the same time the construction of the apron is such as not to exclude the air, but rather, preferably, to direct it toward the roof of the car. The apron extends from side *a'* to side *a'* of the car, and from a point at the end of the car, beneath the perforations *a*, inward toward the center of the car and upward, substantially as is shown at *b*, and at its inner end it is extended upward to form, or is provided with, an upright flange, *b'*; or, what is substantially the same construction, the apron may, from its point of connection with the end of the car, curve inward and upward to the point now reached by the top of the flange *b'*. The apron thus, in rising above the level of the perforations, serves to arrest the moisture and as a gutter to receive and discharge it from the car. Both ends of the car are similarly perforated and furnished with aprons, and in use the air enters through the perforations at the forward end of the car, and goes out through the perforations at the rear end of the car, substantially as is indicated by the arrows in Fig. 1.

I am aware that heretofore railroad-cars have been provided with slotted or louvered front openings having on the inside wire-gauze; also, that cars have been made with a hood at each end over openings provided with valves, in the horizontal bottom of which hoods are perforations protected with wire-gauze. These constructions are quite unlike mine, and I do not claim them.

I claim—

A freight-car having at each of its ends the screened perforations *a* and the apron or gutter B, said perforations being in the upper portion of the upright car end, and said gutter extending from the car end, beneath the perforations, inward and upward into the interior of the car, and so as to leave an opening between its inner end and the car-roof, thereby permitting the air to enter the perforations and pass over the gutter into the interior of the car, but arresting the cinders and moisture, substantially as described.

AUGUST MILLER.

Witnesses:

C. D. MOODY,
J. W. HOKE.