

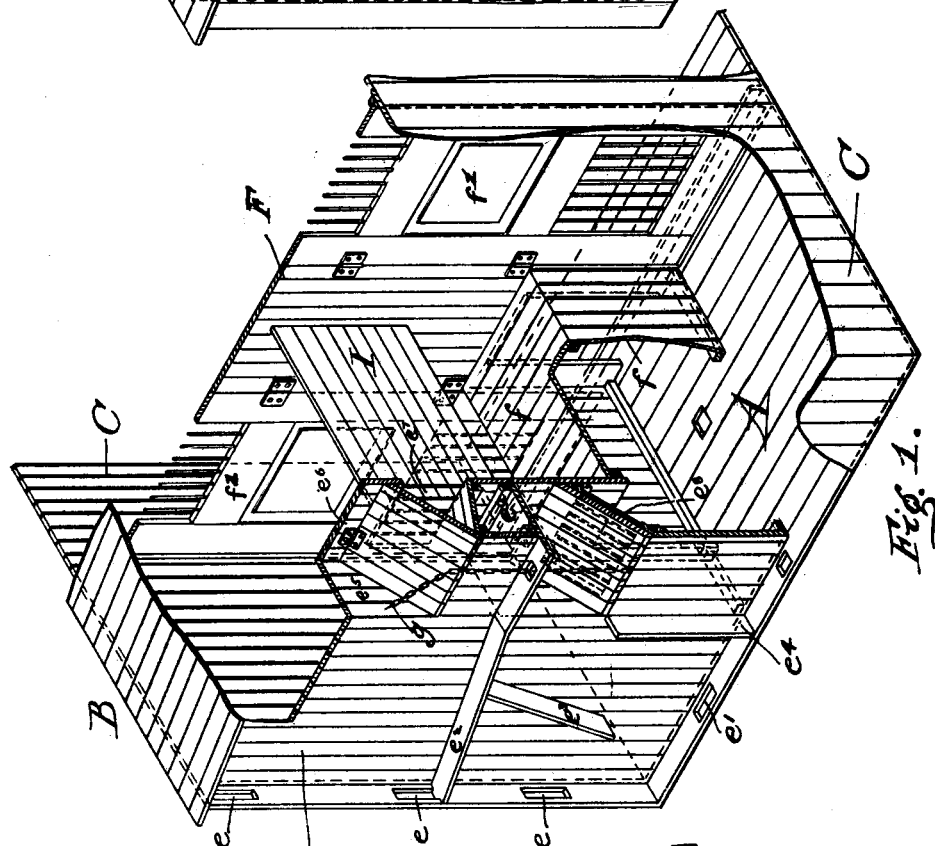
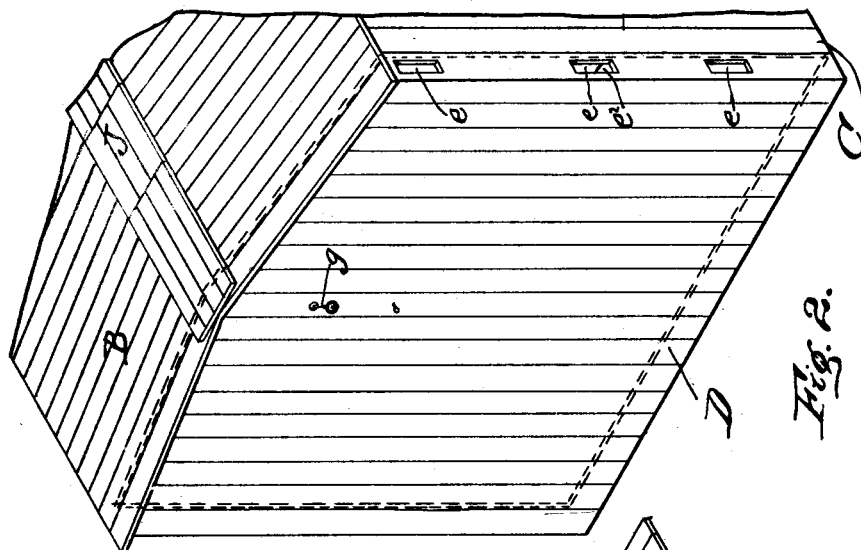
**No. 675,960.**

**Patented June 11, 1901.**

**C. E. LUCAS.**  
**VENTILATOR-REFRIGERATOR CAR.**

(Application filed Apr. 23, 1900.)

(No Model.)



Witnesses,  
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# UNITED STATES PATENT OFFICE.

CHRISTIAN E. LUCAS, OF ATLANTA, GEORGIA.

## VENTILATOR-REFRIGERATOR CAR.

SPECIFICATION forming part of Letters Patent No. 675,960, dated June 11, 1901.

Application filed April 23, 1900. Serial No. 13,895. (No model.)

*To all whom it may concern:*

Be it known that I, CHRISTIAN E. LUCAS, a citizen of the United States of America, and a resident of the city of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Ventilator-Refrigerator Cars; and I do hereby 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to cars for use either as refrigerator-cars for the transportation of meats or as ventilator-cars for fruits, berries, &c.

The object of the invention is to provide a device of this class which will be economical, efficient, and in which the ice-chambers may be used for storage of small packages when running only as a ventilator-car.

To these ends the invention consists of the device hereinafter set forth, and shown in the accompanying drawings, in which—

Figure 1 is an isometric interior view of one end of the car, both ends being duplicates. Fig. 2 is also an isometric view showing the exterior appearance of the car.

In the figures like reference characters are uniformly employed in the designation of corresponding parts in both views.

A is the floor, B the roof, C the sides, and D the end, of the car, all of which should be provided with heat insulation.

Across the end of the car are a false end E and a partition F, both parallel to the end of the car. There are openings  $e$  through the sides of the car, communicating with the space between the ends of the car and the false end E, and openings  $e'$  in the floor of the car, also communicating with this space. A partition  $e^2$  is provided, which divides horizontally this space into two flues, the said partition being depressed at its outer ends for the purpose of causing any cinders which may be carried into the flue above the partition  $e^2$  to be carried out through the openings  $e$  just above the ends of the said partitions  $e^2$ .  $e^3$  is a deflector adapted to catch any cinders which may come in through the openings  $e$  below

said partition  $e^2$  and cause them to fall to the floor in the flue, whence they fall out through the openings  $e'$ , the partitions  $e^4$  assisting in this function. A vertical valve-pocket is formed on the inner side of the false end E by walls  $e^5$  and  $e^6$ , and openings are cut in said false end near the top and bottom ends of the said pocket. This pocket is open at its bottom and near its upper end, each opening being preferably provided with gratings  $e^7$  and  $e^8$ , and a partition  $e^9$  divides the pocket horizontally, whereby two flues are formed through said pocket, the upper one forming a passage from the space between the end D of the car and the false end E of the car above the partition  $e^2$  therein and to the ice-space—that is, the space between the walls E and F—and the lower flue forming a passage between said space below the partition  $e^2$  and the tunnel formed by the casing  $f$ , extending between the walls E and F along the floor, and providing means for access to the draw-head bolts as well as an air-circulating flue leading to the cargo-compartment from the lower end of the aforesaid pocket. It is of the utmost importance that these bolts be accessible without disturbing the metallic lining of the ice-chambers. Valves G and H control, respectively, the openings from the pocket, being hinged to the wall  $e^6$  substantially as shown, closing by gravity and manually operable by a chain  $g$ , connected to both and extending outwardly through the end D of the car, means being provided for hitching it to hold the valves open when the car is to run under ventilation. The wall I forms a brace for the wall  $e^6$  of the pocket, a brake to the fall of ice dropped in through the opening of the roof of the car closed by the door J, and prevents the shifting of the ice when same is piled to this height in the ice-chambers, which are on each side of the tunnel aforesaid and are suitably lined. Doors  $f'$  form means for access to the ice-spaces for cleaning and storage of the cargo therein when the car is not iced, openings at top and bottom serving for air circulation, the doors  $f'$  in the partition F being full height therewith, opening by swinging into the ice-chamber, and being of such width that they will open against the side of the casing over the draw-head bolts and the

sides *e*<sup>s</sup> of the pocket, and so form a smooth wall and permit a part of the cargo to be safely stored within the ice-chamber when the car is running ventilated. These doors are grated  
5 at top and bottom for circulation of air.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a ventilator-refrigerator car, the combination with the floor, sides, roof and ends of a false end within the car substantially parallel to the end thereof, openings in the sides of the car communicating with the space between the end of same and said false end and  
15 two valve-controlled flues leading from said space to respectively near the top and bottom of the cargo-space, and a partition substantially horizontally arranged within the first-named space between the openings into said  
20 flues.

2. In a ventilator-refrigerator car, the combination with the floor, sides, roof and ends of a false end within the car substantially parallel to the end thereof, openings in the  
25 sides of the car communicating with the space

between the end of same and said false end and two valve-controlled flues leading from said space to respectively near the top and bottom of the cargo-space, and a partition substantially horizontally arranged within  
30 the first-named space between the openings into said flues, the ends of said partition being depressed below its center and dust-discharge openings registering with said depressed ends.  
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3. In a ventilator-refrigerator car, the combination with the sides, floor, roof and ends of a false end near and parallel to the end of the car, a pocket in said false end open at its top and bottom ends, valves controlling said  
40 openings and a casing extending along the floor over the draw-head bolts and communicating with the lower opening in said pocket and the cargo-space.

In testimony whereof I hereunto affix my  
signature in presence of two witnesses.

CHRISTIAN E. LUCAS.

Witnesses:

A. P. WOOD,

EDWD. P. WOOD.