(No Model.) 2 Sheets—Sheet 1.

H. F. HOGAN.

REFRIGERATOR CAR.

No. 304,197. Patented Aug. 26, 1884.

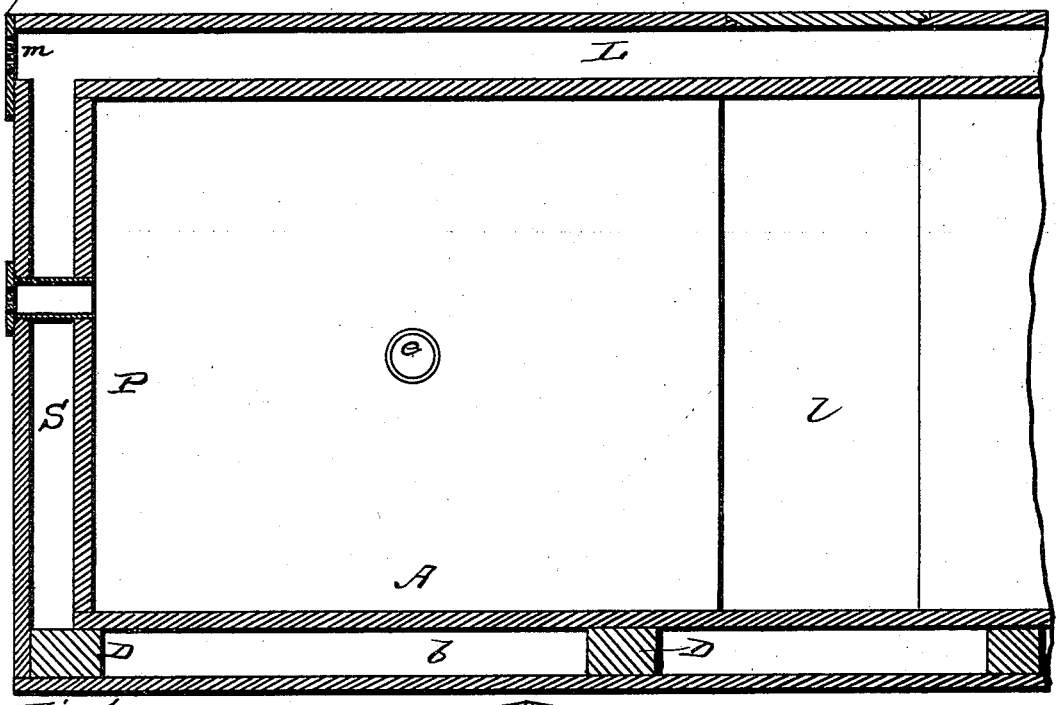

Fig. 1.

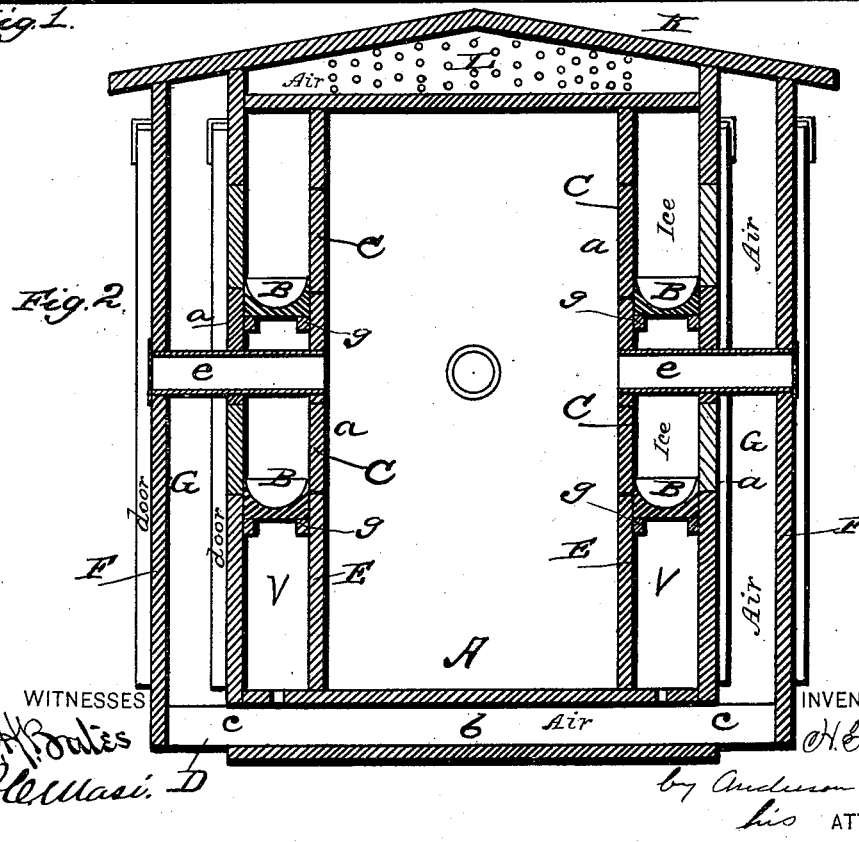

Fig. 2.

WITNESSES

E. H. Bates

P. C. Masi.

INVENTOR

H. F. Hogan

by Anderson & Smith

his ATTORNEYS

(No Model.) 2 Sheets—Sheet 2.

H. F. HOGAN.

REFRIGERATOR CAR.

No. 304,197. Patented Aug. 26, 1884.

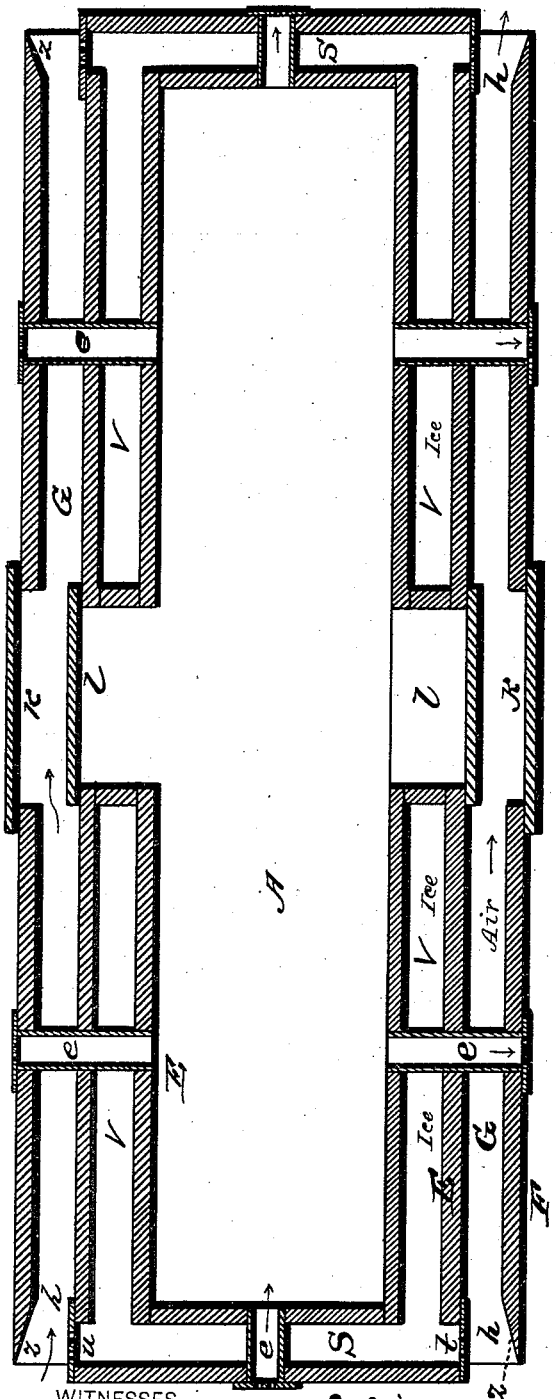

Fig. 3.

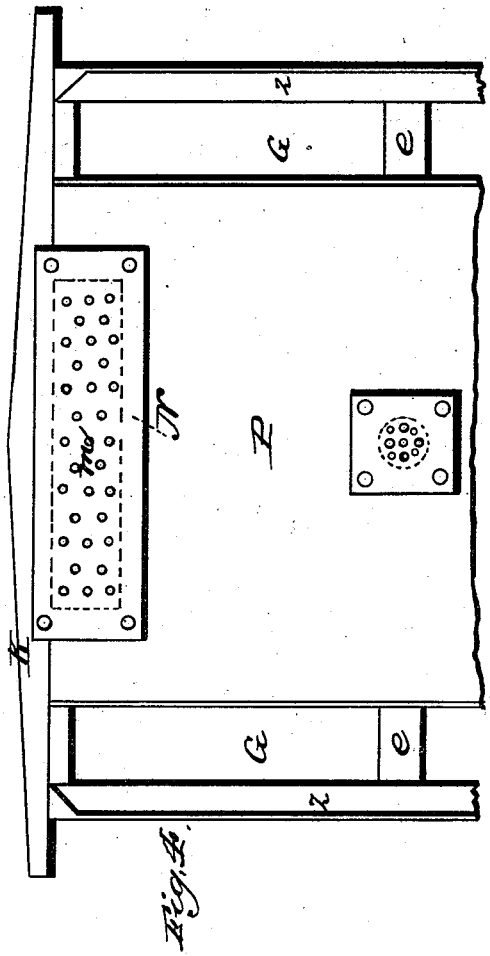

Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

HUGH F. HOGAN, OF ALBION, INDIANA, ASSIGNOR OF ONE-HALF TO WILLIAM FLANNIGAN, OF CHICAGO, ILLINOIS.

REFRIGERATOR-CAR.

SPECIFICATION forming part of Letters Patent No. 304,197, dated August 26, 1884.

Application filed May 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, HUGH F. HOGAN, a citizen of the United States, residing at Albion, in the county of Noble and State of Indiana, have invented certain new and useful Improvements in Refrigerator-Cars; and I do 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 or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical longitudinal sectional view of my device. Fig. 2 is a transverse section of the same. Fig. 3 is a horizontal section, and Fig. 4 is an end view.

This invention has relation to means for preserving fruit, vegetables, meat, and fish from spoiling during transportation; and the invention consists in the construction and novel arrangement of devices, as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, the letter A designates the bottom of the car, which is made double, in order to provide an air-space or chamber, *b*, between the inner and outer floorings, having openings *c*, for free inlet and exit to the air. The cross-timbers D of the bottom are extended laterally beyond the walls E of the car to support outer side walls, F, between which and the walls E are the lateral air-chambers G, extending the height of the car from bottom to top, and open at each end, as shown at *h*. The top K of the car is double, an air-chamber, L, being provided therein, extending the full length of the car, and having air-openings *m* in front and rear, covered with wire-gauze or perforated metal guards N, as shown. The top K extends laterally sufficiently to cover the upper edges of the outer walls, F. The ends P of the car are also made with outer and inner walls, forming air-chambers S, which are provided with openings *t*, for the free inlet and exit of the air. The inner side walls of the car (shown at E) are made double to provide air-chambers V, which are provided with openings *u*, covered with wire-gauze or perforated metal plates, to let the air freely in and out. These lateral air-chambers V should communicate with the air-chamber L in the top of the car. The walls *a a* of the air-chambers V should be made of light material, in order that the full benefit of the air-drafts through the lateral flues G may be had. Air-pipes *e*, protected by wire-gauze or perforated metal at their ends, are extended through the walls F and E into the car. Exit spouts or openings to permit the escape of waste water are provided in the bottoms of the air-chambers V at each end. Within the hollow walls E are provided ledges *g*, in vertical succession at different heights, as shown, to serve as bearings for the movable concave or trough shelves B, which extend lengthwise of the car and serve to hold the ice, which is packed between the walls *a a* in very hot weather. Removable panels C, forming portions of the inner wall *a*, are provided, in order that the interior of the chambers V can be easily reached to facilitate the ice-packing. The air-chambers S in the end walls may also be packed with ice. The open ends *h* of the side air-passages, G, are made flaring, as indicated at *z*, in order to guide as much air as possible into these passages. The inner walls, E, of the car have door-openings *l*, and sliding doors are provided to close the same. The outer lateral walls, F, also have door-openings *k* opposite the door-openings *l*, and sliding doors are also provided therefor.

This car is constructed in such a manner as to provide free ventilation through its interior and about its exterior. The powerful draft through the lateral flues G when the car is in motion causes air to be forced through the car on each side, and is designed to effectually dispel surface moisture on the articles being transported in the car. In hot weather this air is cooled by packing the chambers of the hollow walls with ice.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a preserving-car, the combination, with the hollow perforated walls E, having removable ice-troughs in the chambers there-

of, of air-passages G, extending lengthwise of the car exterior to said hollow perforated walls, as specified.

2. The preserving-car having the air-chambers *b*, L, S, and G, the latter having flaring openings *z* at opposite ends of the car, and the lateral and end chambers having air-tubes *e*, the chambers S having openings *t*, the lateral chambers V, having the removable ice-troughs, and the respective chambers having sliding doors, substantially as specified.

3. The preserving-car having open air-chambers in its top, bottom, and ends, and hollow side walls E, in combination with outer side walls, F, forming, with the side walls E, lateral air-passages G, having flaring openings *z* at each end and extending from end to end of the car, and the lateral chambers V V, having the removable ice-troughs, substantially as specified.

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

H. F. HOGAN.

Witnesses:

DAVID MCLAUGHLIN,

T. J. LUCE.