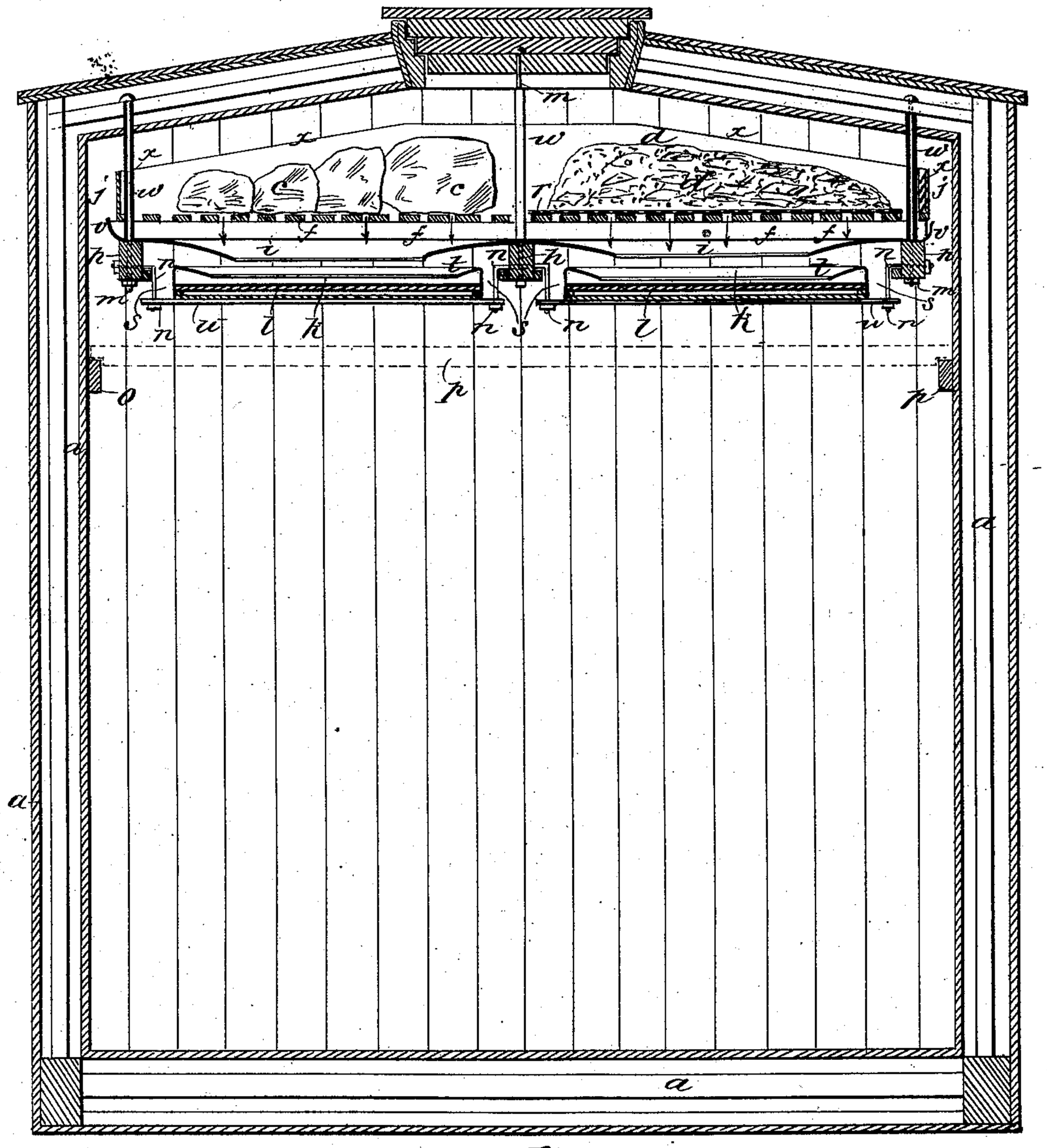
(No Model.)

# C. P. JACKSON.

## REFRIGERATOR CAR.

No. 281,631. Patented July 17, 1883.

Fig. 1.

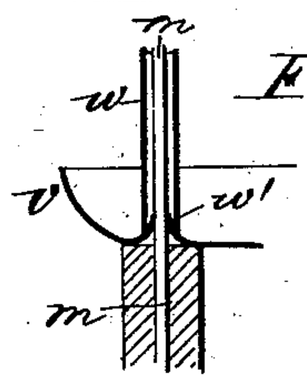



WITNESSES:

Frances McArdle.

C. Sedgwick

Fig. 2.




INVENTOR:

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# UNITED STATES PATENT OFFICE.

CHARLES P. JACKSON, OF CHICAGO, ILLINOIS.

## REFRIGERATOR-CAR.

SPECIFICATION forming part of Letters Patent No. 281,631, dated July 17, 1883.

Application filed April 13, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES P. JACKSON, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Refrigerator-Cars, of which the following is a full, clear, and exact description.

My invention consists of improved arrangements of apparatus for carrying the ice for cooling the car overhead, and extending over the whole body of the car, with the exception of an opening or flue for the free passage of warm air, extending all around the inside of the car, and protected from the ice by a partition, which extends to near the top of the ice-room, as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a transverse section of a refrigerator-car constructed according to my invention, and Fig. 2 is a detail of the ice-rack hangers.

The ice *c* or broken ice and salt *d* rest on a grating or ice-rack, *f*, which may be covered by perforated galvanized iron *r*, if desired, through which the cold air and drip fall. They also fall through an open space into pans *k*, the pans and grating being so arranged that the melting of the ice is entirely from the under surface, except when broken and used with salt. The pans *k* rest on a double ceiling, *l*, with a hollow space between the upper and lower plates to prevent the passage of heat or cold, thereby avoiding condensation on the under surface of the ceiling. The pans are flanged inwardly at *t*, to prevent splashing over of the water by the motion of the car. The grating rests on beams *h*, running fore and aft to within a few inches of the ends of the car—preferably three or more beams—the outer ones being placed away from the side walls of the car-body, so as to leave an uninterrupted passage, *j*, for warm air. The ceiling *l* is suspended by bolts *n*, having a square turn, and, passing laterally through the beams, bolts *n* extend down through supports *u*, on which the suspended ceiling rests, with nuts below the supports, which may be used for raising or lowering the suspended ceiling at will, and thereby lessening or increasing the temperature. The suspended ceilings and pans are to be in two or more sections, as deemed necessary, but preferably two sections extending parallel with the beams, with an open air-space at *s* for the admission of cold air between the ceiling and beams each side of the center beam and one side of the side beams.

To protect the beams *h* from getting wet, metal aprons *i* cover them, and said aprons turn up on the back at *v* over the two outside beams, said aprons projecting inward over the cold-air spaces to carry the drip into the pans, the center beam, *h*, being covered in the same manner, only the apron projects each way over the cold-air openings, or, in other words, the apron is double. The beams are to be supported by rods *m*, extending down from the top of the car and passing through the beams, with nuts underneath. A gas-pipe, *w*, larger than the rods, and of the proper length to inclose the rods, and covering a raised surface, *w'*, of the aprons around the hole in the apron, is employed on the rods to prevent the water from falling down the rods into the beams, as shown in Fig. 2.

The partitions *x* between the warm-air flues *j* and ice-room are to be metal, as represented on the left-hand side, or beveled slats, as at the right-hand side, in the drawings, to admit of the free passage of the cold.

There will in practice be two discharge-pipes at each end of the pans at each corner, and leading to a main discharge-pipe in the center of the car, and thence to a main discharge-pipe at each end of the car.

*o* represents cleats on the inner walls of the car for the support of cross-bars *p*, from which the meat or other freight is to be hung.

The walls of the car are to be insulated by dead-air spaces *a*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The beams *h*, for supporting the grating and the pans, suspended by rods *m*, inclosed in tubes *w*, the aprons having raised surfaces

*w'*, for protecting the beam from the water, substantially as described.

2. The ceilings *l*, supporting the pans, suspended from the beams *h* by inverted-L-shaped and staple-shaped bolts *n*, to provide passages *s* between said beams and ceilings for the circulation of cold air, substantially as described.

3. In a refrigerator-car, the drip-pans *k*, supported under the ice-racks, and having the double ceiling *l*, with an air-space between said ceilings, to prevent condensation on the lower surface of the ceiling, substantially as described.

CHARLES PRINGLE JACKSON.

Witnesses:
O. D. NOBLE,
B. F. HEAD.