

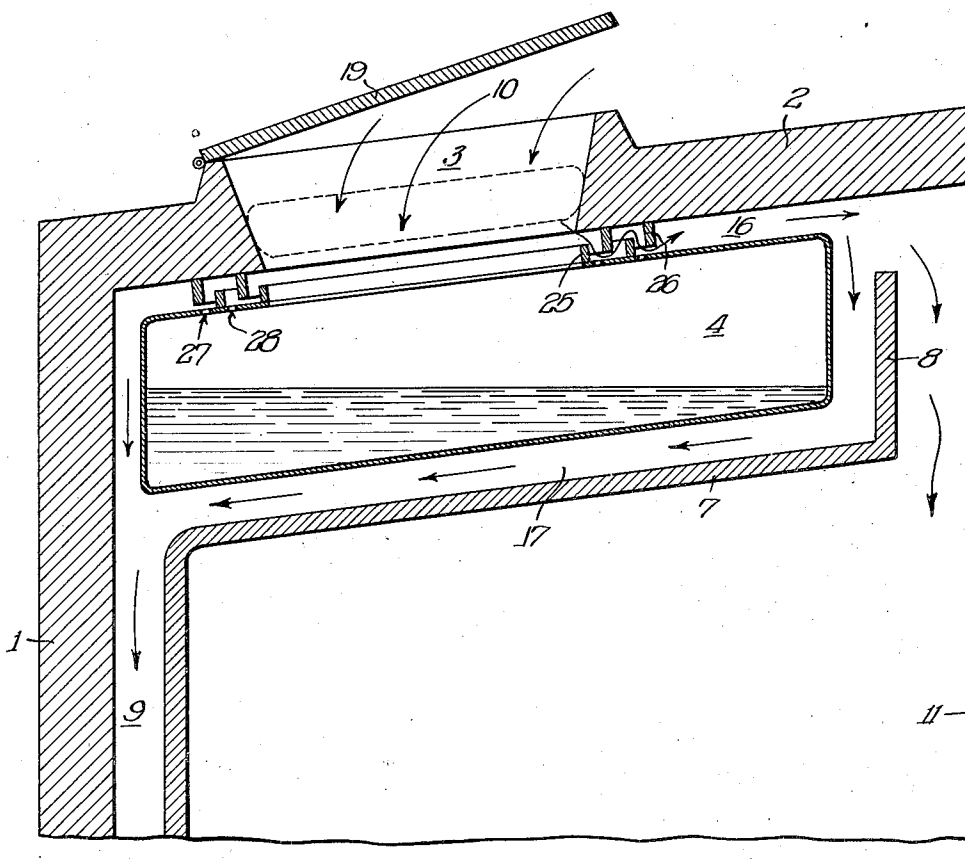
Nov. 9, 1948.

E. R. BATTLETT ET AL

2,453,295

ICE CONTAINER FOR REFRIGERATOR CARS

Original Filed Jan. 26, 1945



INVENTORS.
Edwin R. Battley,
BY George E. McCoy,
George E. McCoy

UNITED STATES PATENT OFFICE

2,453,295

ICE CONTAINER FOR REFRIGERATOR CARS

Edwin R. Battley and George E. McCoy,
Montreal, Quebec, CanadaOriginal application January 26, 1945, Serial No.
574,790. Divided and this application March
17, 1947, Serial No. 735,104

6 Claims. (Cl. 62—17)

1

This invention relates to railroad refrigerator cars having hatches in the roof thereof through which refrigerant containers, positioned immediately below the roof, but spaced slightly therefrom for air circulation therebetween, are serviced, said containers having openings in the top surface thereof registering with the hatch openings in the car roof, and is an improvement over the construction shown in Bonsall Patent No. 2,136,999 of November 15, 1938.

The invention more specifically relates to such cars having refrigerant containers of the solid type for holding brine or water ice as the refrigerating medium, and which containers, therefore, must have means to prevent service movements of the car from causing the liquid in said containers to surge out through the filling opening into said space thereabove and thence into the car.

An object of the invention is to so associate the container with the roof and hatch plug so that when the plug is opened for ventilation air coming into the car through the hatch may circulate about the container and enter the lading compartment of the car.

A further object of the invention is to provide means between the refrigerant container and the car roof so as to materially retard, if not prevent, surging of the liquid therein out through the filling opening.

Other objects and advantages of the invention will appear in the following description thereof.

Referring now to the accompanying drawing forming part of this application and wherein like reference characters indicate like parts:

The figure is a vertical section of a railway car showing a hatchway construction and the relation of my invention thereof.

In the drawings, 1 represents the side wall of a refrigerator car, and 2 the roof thereof, both of which, it will be understood, are of suitable insulated construction, the details of which may be omitted, since they form no part of our present invention.

A hatch opening 3 is formed in the roof 2, extending therethrough and is provided with a hatch frame as is common. Immediately below the roof, but spaced slightly therefrom, is a refrigerant container 4, having an opening 5 in the upper surface thereof which registers with the hatch opening 3. The container 4 is spaced from the roof 2 to provide an air circulating and air cooling space 16, and also to provide a path for ventilating air to the interior of the car when

2

the hatch plug is removed or raised for ventilating purposes.

As is common in refrigerator cars of this type, a substantially horizontally disposed drip pan (or ceiling) 7 is installed below the refrigerant container 4 and spaced slightly therefrom to form an air cooling space 17 therebetween. This drip pan extends from approximately the longitudinal center of the car 19 where it is provided with an upwardly extending baffle 8. Space 17 communicates with flue 9 associated with said wall 1. A path for circulating air, when the car is under ventilation, is thus provided around the container and downwardly through the interior of the car, as indicated by the arrows.

The hatch plug is shown at 10, the major portion of which may be of a construction as is found in such plugs now on the market for use when the car is under refrigeration.

A baffle construction is provided about the perimeter of the opening 5 and in the space 16 between the container 4 and roof 2. This baffle construction comprises a series of overlapping vanes 25—26 so that air may readily circulate therethrough, but any surging of liquid within the container is effectively retarded, if not prevented, from escaping into the space 16. Should any surging liquid escape over some of the vanes, we have provided small drain holes 27—28 through the upper wall of the container so that said liquid may drain back thereinto.

The accompanying drawing illustrates the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof, within the scope of the claims, will occur to persons skilled in the art.

This is a division of our co-pending application, Serial No. 574,790, filed January 26, 1945.

We claim:

1. In a refrigerator car having a hatch opening in the roof thereof, a refrigerant container spaced below said roof so as to provide a space between the roof and the container which communicates with the hatch opening and the interior of the car for ventilation, said container having a filling opening registering with the hatch opening, a plurality of spaced vanes depending from said roof in overlapping and spaced relation with a plurality of spaced upstanding vanes on the container around the perimeter of the filling opening, whereby air entering the hatch opening may pass between said vanes into the interior of the car, and drain holes in the container and adjacent

3

said upstanding vane so that liquid surging from the container is baffled by said depending vane and drained into the container.

2. In a refrigerator car having a hatch opening in the roof thereof and a lading compartment, a refrigerant container disposed below and spaced from said roof to provide a space therebetween for the circulation of air between said hatch opening and said lading compartment, said container having a filling opening registering with said hatch opening, and a plurality of spaced vanes within said space extending from opposite sides of said space sufficiently to prevent liquid within the container from surging out of the filling opening through said space to the interior of the car during service movements of said car without preventing air communication between said hatch opening and said lading compartment through said air circulating space.

3. In a refrigerator car having a hatch opening in the roof thereof, a refrigerant container spaced below said roof so as to provide a space between the roof and the container, which space communicates with the hatch opening and the interior of the car for ventilation, said container having a filling opening registering with said hatch opening, a plurality of spaced vanes depending from said roof in overlapping and spaced relationship with a plurality of upstanding vanes on said container, about the filling opening to retard liquid within the container from surging out of the filling opening through said space into the interior of the car, without materially restricting air circulation through said space.

4. A refrigerant container for a railway refriger-

4

erator car, said container having a filling opening therein, a plurality of spaced upstanding vanes adjacent and about the filling opening to retard liquid within said container from surging out of said opening beyond said vanes.

5. A refrigerant container for a railway refrigerator car, said container having a filling opening therein, a plurality of spaced upstanding vanes adjacent and about the filling opening to retard liquid within said container from surging out of said opening beyond said vanes, and drain holes between adjacent vanes to drain any liquid surging over a vane back into the container.

6. A refrigerant container for a railway refrigerator car having a hatch opening in the roof thereof and a plurality of spaced vanes depending from said roof about said opening, said container having a filling opening therein registrable with said hatch opening, a plurality of spaced upstanding vanes adjacent and about the filling opening and arranged so as to overlap said depending vanes to retard liquid within said container from surging out of said opening beyond said vanes.

EDWIN R. BATTLE.
GEORGE E. MCCOY.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
172,546	Zimmerman	Jan. 18, 1876