W. B. HALL.

REFRIGERATOR CAR.

APPLICATION FILED JAN. 15, 1917.

1,268,566.

Patented June 4, 1918.

3 SHEETS—SHEET 1.

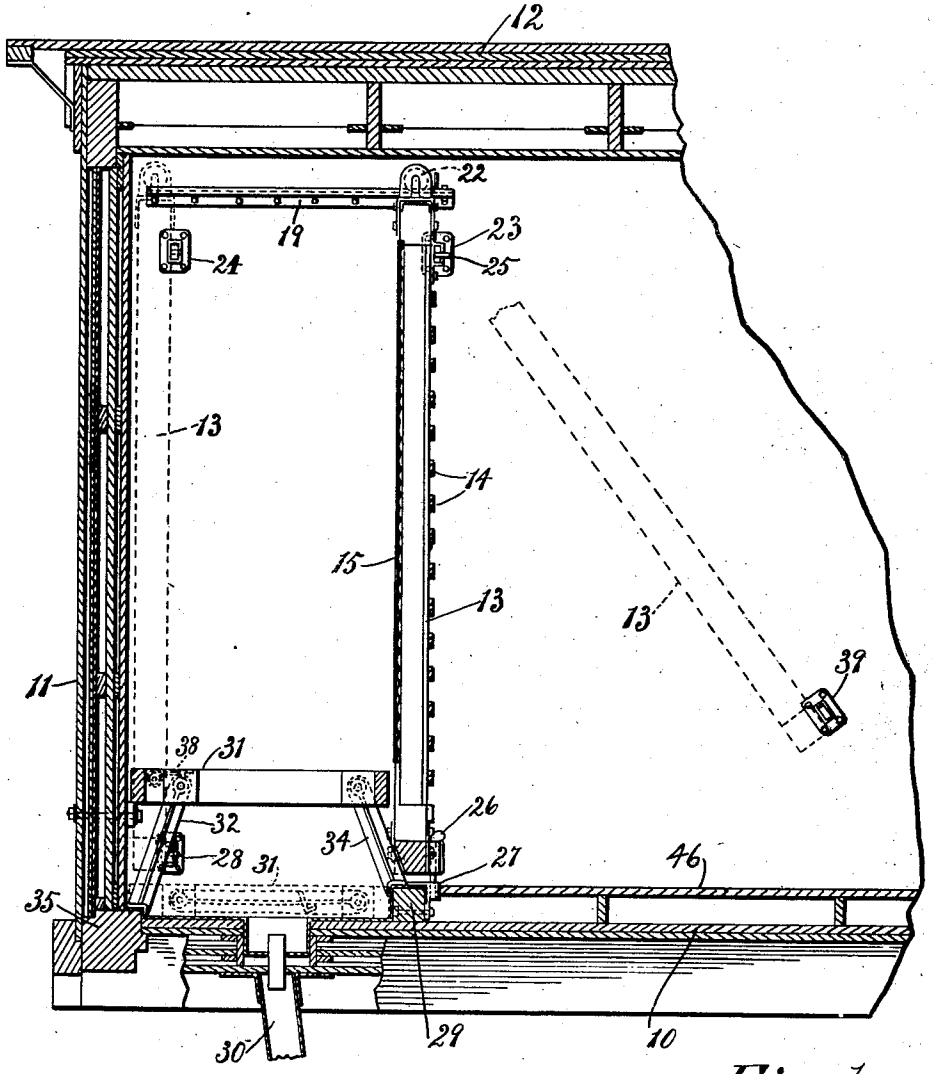


Fig. 1.

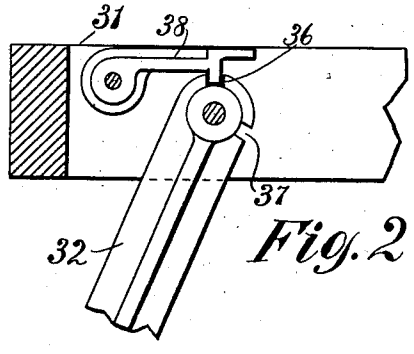


Fig. 2

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3 SHEETS—SHEET 2.

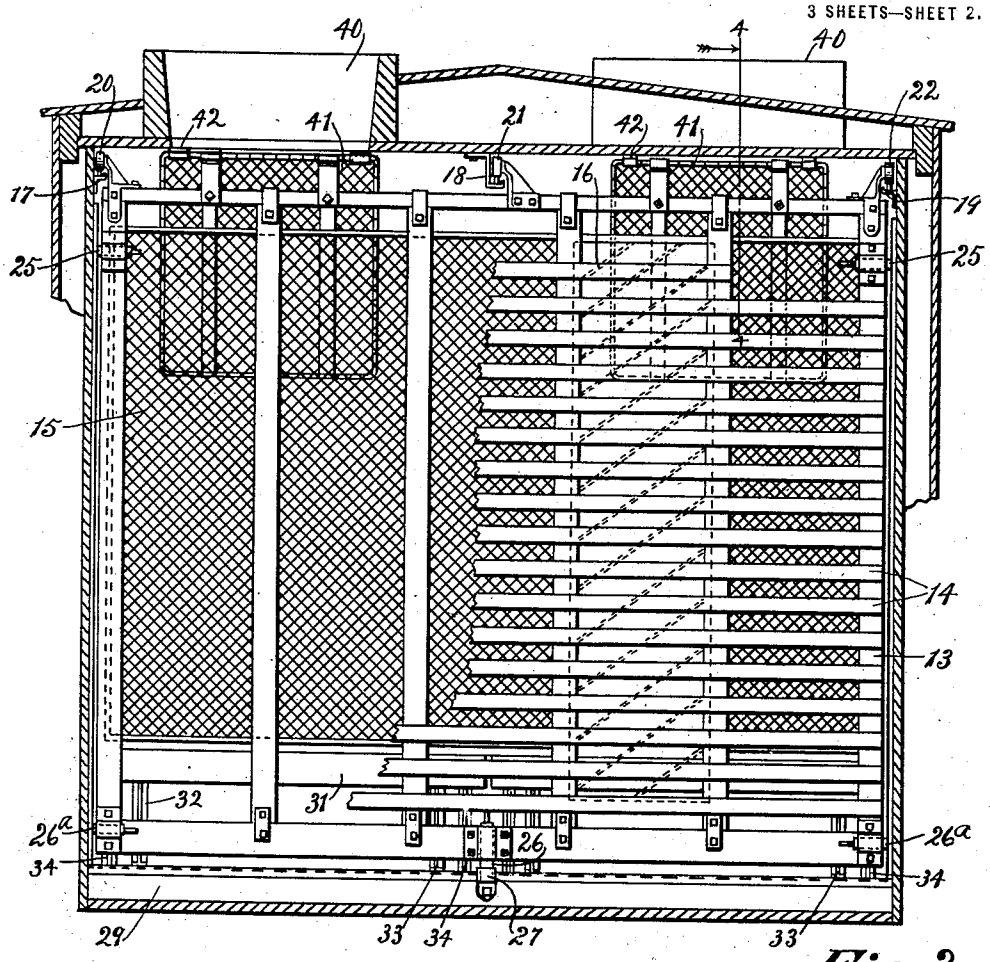


Fig. 3.

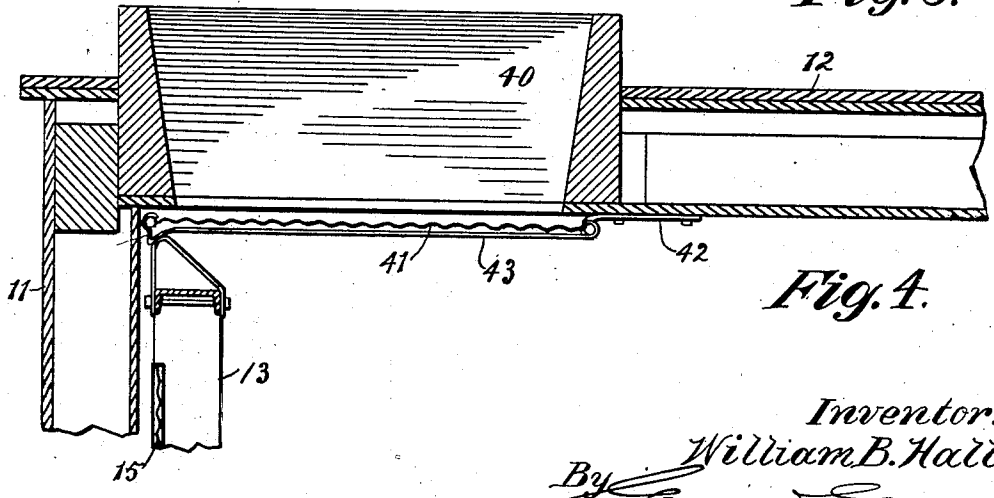


Fig. 4.

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3 SHEETS—SHEET 3.

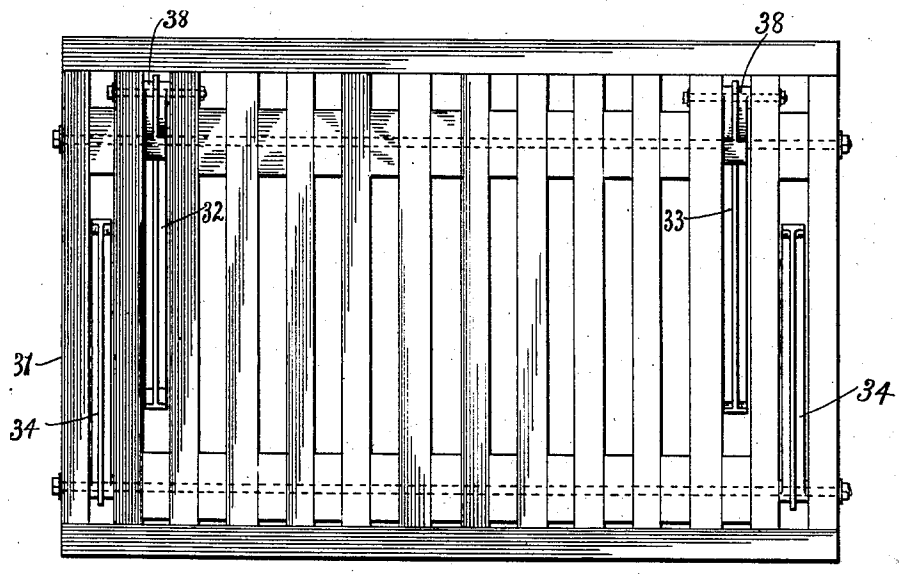


Fig. 5.

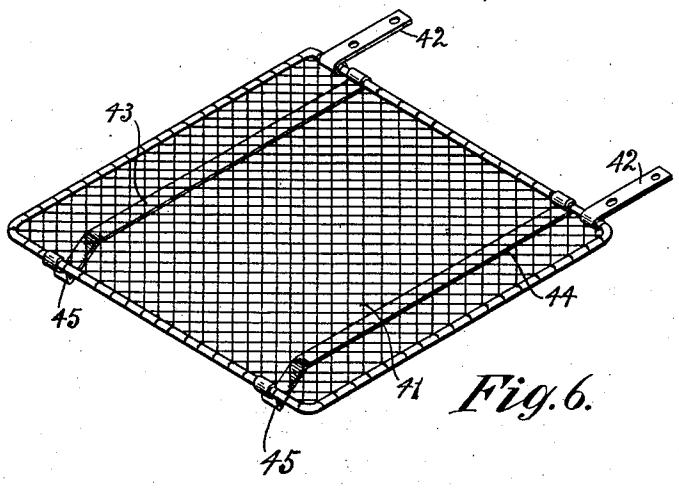


Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM B. HALL, OF CHICAGO, ILLINOIS, ASSIGNOR TO UNION RAILWAY EQUIPMENT CO., A CORPORATION OF SOUTH DAKOTA.

REFRIGERATOR-CAR.

1,268,566. Specification of Letters Patent. Patented June 4, 1918.

Application filed January 15, 1917. Serial No. 142,439.

To all whom it may concern:

Be it known that I, WILLIAM B. HALL, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Refrigerator-Cars, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to refrigerator cars of the convertible type, in which the inner wall of the ice bunker takes the form of a bulkhead so mounted that it may be shifted to a storage position, leaving substantially the entire interior of the car available for the reception of freight not requiring refrigeration.

The object of the invention is to provide an improved form of construction increasing the ease and convenience of shifting the bulkhead; an improved arrangement of the ice supporting grating; and improved means for guarding the icing aperture when used for the purpose of ventilation.

The invention consists in a structure such as hereinafter described, and as illustrated in the accompanying drawings, in which—

Figure 1 is a detail longitudinal vertical section of a car;

Fig. 2 is a detail of the ice-supporting grating;

Fig. 3 is a detail transverse vertical section of the car looking toward the ice bunker, some parts being shown in elevation and some parts being broken away;

Fig. 4 is a detail section on the line 4—4 of Fig. 3;

Fig. 5 is a plan view of one of the ice gratings; and

Fig. 6 is a view in perspective of a grated screen for the ice opening.

The bottom, end wall and roof of a car are shown, respectively, at 10, 11, 12. The bulkhead forming the inner wall of the ice bunker is represented at 13, and is preferably faced on the outer side with slats 14 and at its inner surface with a heavy wire mesh 15. This bunker may be constructed in any desired manner, as, for example, with inclined air ducts, as indicated in dotted lines at 16, following the type known as the Pries siphon.

The bulkhead 13 extends from side to side of the car, and is supported on tracks 17, 18 and 19 extending longitudinally of the car, by means of rollers 20, 21, 22, riding on such tracks, whereby the bulkhead may be moved to the outer or service position shown in solid lines in Fig. 1, to form the inner wall of the ice bunker, or may be moved backwardly against the end of the car to the position indicated in dotted lines in said figure, leaving the body of the car substantially clear for the reception of freight.

Wall plates 23, 24, are fixed to the side walls of the car to receive bolts 25, carried by the bulkhead, when the latter is in either of its positions. A bolt 26, located at the lower margin of the bulkhead, coöperates with a fixed socket 27 for securing the bulkhead in its advance position. Socket plates 28, attached to the side walls near the end of the car, coöperate with laterally projecting bolts 26^a, located near each lower corner of the bulkhead, for holding the latter in retracted position.

A rail 29 is fixed across the bottom of the car in line with the forward position of the bulkhead, and closes the space below the latter. Preferably this rail is faced with metal, as shown, and to it the socket plate 27 is attached. This rail forms the front wall or splash rail of a well for receiving the drippings from the ice, such drippings being discharged through any suitable outlet, such as the trapped discharge tube 30.

The ice grating 31 takes the form of a pair of frames with cross-bars, which together extend from side wall to side wall of the car and from the end wall thereof to the inner face of the bulkhead when the latter is in its service position. These frames are supported by legs 32, 33 and 34, four being adequate for the purpose, each of which is pivoted to a cross-member of the grating in order that it may be downwardly extended to support the grating, as shown in Fig. 1, or may be swung upwardly between the cross-bars to permit the grating to rest upon the car floor directly back of the rail 29, as indicated by dotted lines in Fig. 1.

As shown, the rearward legs 32, 33, fit upon the inner upper corner of the car sill 35, and the forward legs 34 fit upon the upper rearward angle of the rail 29, the lower ends of the legs being rabbeted to conform to these supporting members. Prefer-

ably also the legs adjacent the end of the car are notched at their hub portions, as shown at 36, 37, for the engagement by a latch 38 pivoted to the grating, which thereby locks the leg in either of its positions.

The bulkhead is capable of being swung forwardly from its service position, as indicated by dotted lines in Fig. 1, a socket plate 39 being fixed to the side of the car for receiving the bolts 26ª to hold it in a somewhat elevated position to permit access to the bunker for the purpose of cleaning out the ice and raising and lowering the grating.

Icing apertures, as 40, are provided in the top of the car above the bunker, and when the car is being used for freight not requiring refrigeration, the bulkhead being in its retracted position, these apertures may be left open for ventilating purposes, and when thus used are required to be guarded to prevent unwarranted access to the interior of the car therethrough. There is accordingly provided a screen 41, associated with each of the icing apertures and being hingedly attached to the car roof, as shown at 42, adjacent the margin of the opening most remote from the end of the car, the screen being of sufficient length to extend entirely across the opening when swung upwardly. When the bulkhead is in service position these screens swing downwardly against its inner face.

As the bulkhead is moved back to storage position it forces the screens upwardly to the position shown in Fig. 4. To facilitate this action each of the screens is provided with a pair of wear plates 43, 44, along which the upper margin of the bulkhead will slide. At the free end of the screen each of these wear straps may be bent downward, as shown at 45, in order that as the bulkhead comes in contact with the end wall of the car the screen will be cammed upwardly tightly against the car roof.

Cars of this character are frequently used for the transportation of perishable freight, such as fruit and vegetables, not requiring refrigeration but in connection with which ventilation is necessary. The floor of the car is consequently usually provided throughout with a slatted grating 46, and the splash rail 29 will be made of a height corresponding to the thickness of this grating. When, therefore, the bulkhead is shifted backwardly the ice grating and rail form a continuation of the flooring of the body of the car and at the same level.

The construction shown and described, while preferable, may be deviated from as to detail without departing from the scope of the invention.

I claim as my invention—

1. In a refrigerator car, in combination, a body comprising an end and side walls, a floor and roof, a bulkhead for forming the inner wall of an ice bunker and movable against and parallel with the end wall of the car body, and a grid having folding legs attached thereto adjacent each edge and adapted to rest bodily on the floor of the car when its legs are folded upwardly.

2. The combination with a car body, of a rail fixed transversely to the car floor and forming the front wall of a drip well for an ice bunker, a bulkhead movable from a position immediately above the rail to a position against and parallel with the end wall of the car, a vertically adjustable grid adapted to lie between the rail and the end wall of the car when in its lower position and folding legs for supporting the grid in elevated position and engaging the same adjacent each edge and being inclined outwardly with reference to the grid when in service.

3. In a refrigerator car, the combination with side and end walls thereof, of a bulkhead carried by the side walls and bodily movable from an upright position against the end wall to an upright position away from such wall, and being adapted to swing upwardly from its latter position, and means for supporting the bulkhead when thus swung upwardly.

4. In a convertible refrigerator car having an icing opening, a bulkhead movable in a vertical position from the end wall of the car forwardly to form the front wall of an ice bunker, and a screen hinged to the car adjacent the inner margin of the ice opening and back of the service position of the bulkhead, such screen being adapted to be swung upwardly by the bulkhead in its movement toward the car end, and to extend across the opening.

5. The combination with a car body, of a rail fixed transversely to the car floor and forming the front wall of a drip well for an ice bunker, a false floor forward of and approximately flush with the upper face of the rail, a bulkhead movable from a position immediately above the rail to a position against and parallel with the end wall of the car, and a vertically adjustable grid adapted to lie between the rail and the end wall of the car when in its lower position, its upper surface when so disposed being approximately flush with the upper surface of the rail.

WILLIAM B. HALL.