

1,242,091.

G. W. WATKINS.
REFRIGERATOR CAR.
APPLICATION FILED JAN. 11, 1916.

Patented Oct. 2, 1917.
2 SHEETS—SHEET 2.

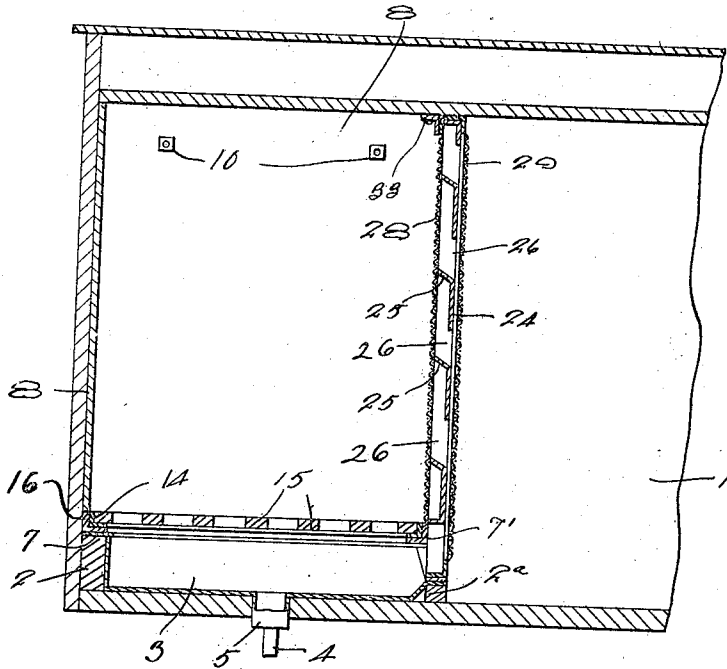


Fig. 3

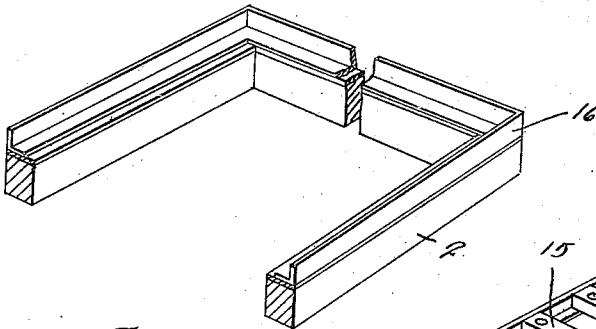


Fig. 5

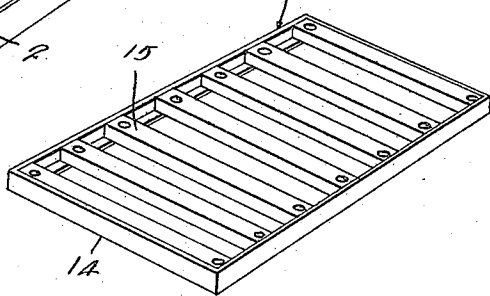


Fig. 4

Witnesses

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REFRIGERATOR-CAR.

1,242,091.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE W. WATKINS, a citizen of the United States, residing at Lebo, in the county of Coffey and State of Kansas, have invented certain new and useful Improvements in 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.

This invention relates to refrigerator railway cars, and the primary object of the invention is to provide an ice retaining structure for positioning in the ends of refrigerator cars, whereby the drainage pan may be easily removed without necessitating the removal of a part of the end of the car, as is necessary in the ordinary construction of refrigerating cars now commonly in use.

Another object of the invention is to provide in a refrigerator car structure as specified, a novel structure of ice-supporting grates, constituting a pair of hingedly supported grates each of which are composed of frames having a plurality of transversely extending bars secured thereto.

A still further object of this invention is to provide a front or inner side for the ice retaining compartment of the refrigerator car, which front is composed of a pair of hingedly mounted doors.

With the foregoing and other objects in view, this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail reference will be had to the accompanying drawings, wherein like characters designate like and corresponding parts through the several views, and in which:

Figure 1 is a cross sectional view through a refrigerator car and the ice containing compartment therein,

Fig. 2 is a cross sectional view through the refrigerating car, showing the inner end of the ice containing compartment.

Fig. 3 is a longitudinal section through one end of a refrigerating car and the ice containing compartment,

Fig. 4 is a perspective view of one of the grate bars,

Fig. 5 is a fragmentary perspective view of the grate bar.

Referring more particularly to the drawings, 1 designates an ordinary refrigerator railway car which has wooden bars 2 attached to the floor of the car at each end of the car. The wooden bars 2 form a rectangular frame, and the bar 2^a which is positioned inwardly from the end of the car is narrower than the remaining bars 2, as is clearly shown in Fig. 3 of the drawings. The drip pan 3 is positioned within the rectangular space within the frame formed by the bars 2 and 2^a and it has a drainage pipe 4 communicating with the center of its bottom. The usual cone, indicated at 5, of the drainage pipe 4 is positioned within the depending structure 6 formed on the drain pan 3 in which the upper end of the drainage pipe rests.

A tin strip or sheeting, indicated at 7, is positioned upon the upper edges of the bars 2 and 2^a and is provided for preventing the rotting of the bars by the ice. The interior of the car 1 corresponding to the floor space occupied by the rectangular frame formed by the bar 2 is covered with metallic lining, as indicated at 8. The inner end wall of the ice containing compartment which is formed by the lining 8 is composed of two sections which have their meeting edges engaging centrally of the sides of the car, as is shown at 9. Any suitable structure, such as bolts, indicated at 10, may be provided for attaching the lining 8 to the car.

Grate bars 11 and 12 are provided, which grate bars are composed of rectangular frames 14 composed of angle iron and having a plurality of transversely extending bars 15 secured to the side angle irons of the rectangular frame in spaced relation to each other, as clearly shown in Figs. 3 and 4 of the drawings. The grate bars 11 and 12 rest within the frame formed by the angle irons 16, which are attached to the upper surfaces of the bars 2 and the grate bars are hingedly connected, as is shown at 17, for swinging upwardly into the vertical position, as shown in dotted lines in Fig. 1 of the drawings. Suitable hooks 18 are provided for engaging the upper free ends of the grate bars for holding them in their vertical position.

The forward end of the ice retaining compartment is composed of right and left hand hingedly supported door structures 20 and 21, respectively. The door structures 20 and 21 are composed of frames 22 which

have a plurality of uprights 23 secured thereto at spaced intervals across the width of the door. Siphon plates, indicated by the numerals 24, are positioned between the uprights 23 and are provided for permitting of an air circulation within the ice receiving compartment. The siphon plates 24 are preferably constructed of tin or analogous material and they have a plurality of tongues 25 cut therefrom in vertical spaced relation to each other, which tongues are bent inwardly, as clearly shown in Fig. 3, forming openings 26 through which the air may circulate. Meshwork screenings are attached to both the inner and outer sides of the door structure, as shown at 28 and 29.

The doors 20 and 21 have angle iron indicated at 7' secured to their inner surfaces, which form supports for the grate bars 11, and an angle iron 33 is secured to the inner surface of the top of the car and forms an abutment against which the top edges of the doors 20 and 21 engage when in their innermost position, thereby relieving the doors of strain when the car is loaded.

A double bolt structure, as indicated at 30, is provided for locking the doors 20 and 21 in closed position. This bolt structure is of the ordinary vertical type of bolt which is controlled by a pivotally mounted hand lever 31.

In reducing the invention to practice certain minor features of construction, combination and arrangement of parts may necessitate alternations to which the patentee is entitled provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:

The combination with a refrigerator car including a floor, of a frame upon the floor including side and end bars, an inner lining for said bars, said lining having a bottom wall resting upon the floor of the car forming a drip pan, a drain pipe communicating with said drip pan centrally thereof, a rectangular frame formed of angled bars secured upon the upper edges of the bars of the first named frame, a pair of hinged mounted doors positioned within the car at the inner side of said rectangular frame forming the inner walls of the ice containing compartment, the lower edges of said doors engaging one flange of the angle bars of the second named frame, an ice supporting frame including side and end bars, grate bars secured to the side bars of the ice supporting frame, said ice supporting frame adapted to be positioned upon the angled bars of the second named frame and supported thereby.

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

GEORGE W. WATKINS.

Witnesses:

LOUIS SIEBUHER,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."