

J. M. BORROWDALE & J. STRAIN

REFRIGERATOR CAR.

APPLICATION FILED MAR. 8, 1909.

938,958.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 1.

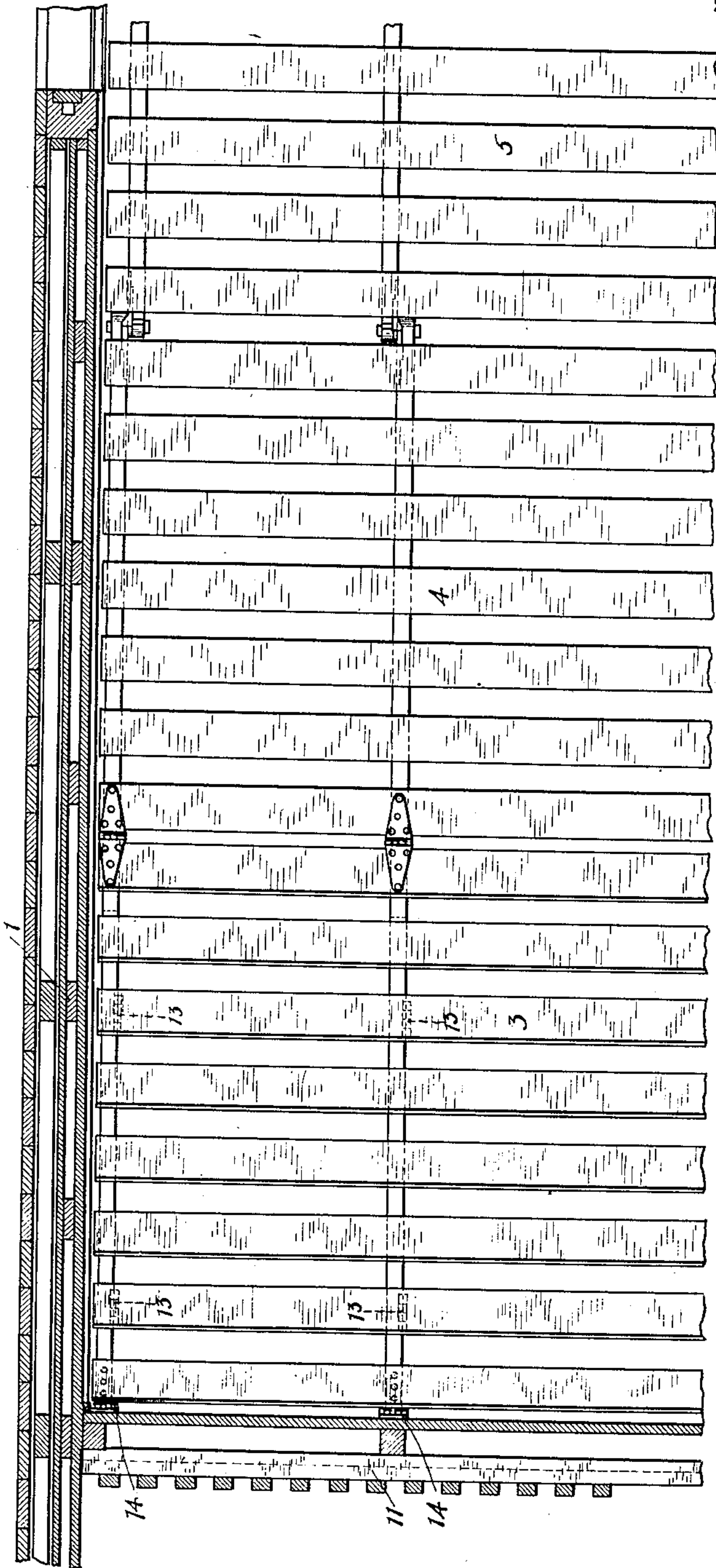


Fig. 1.

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Inventors,  
John M. Borrowdale & John Strain  
by Joshua R. H. Porter  
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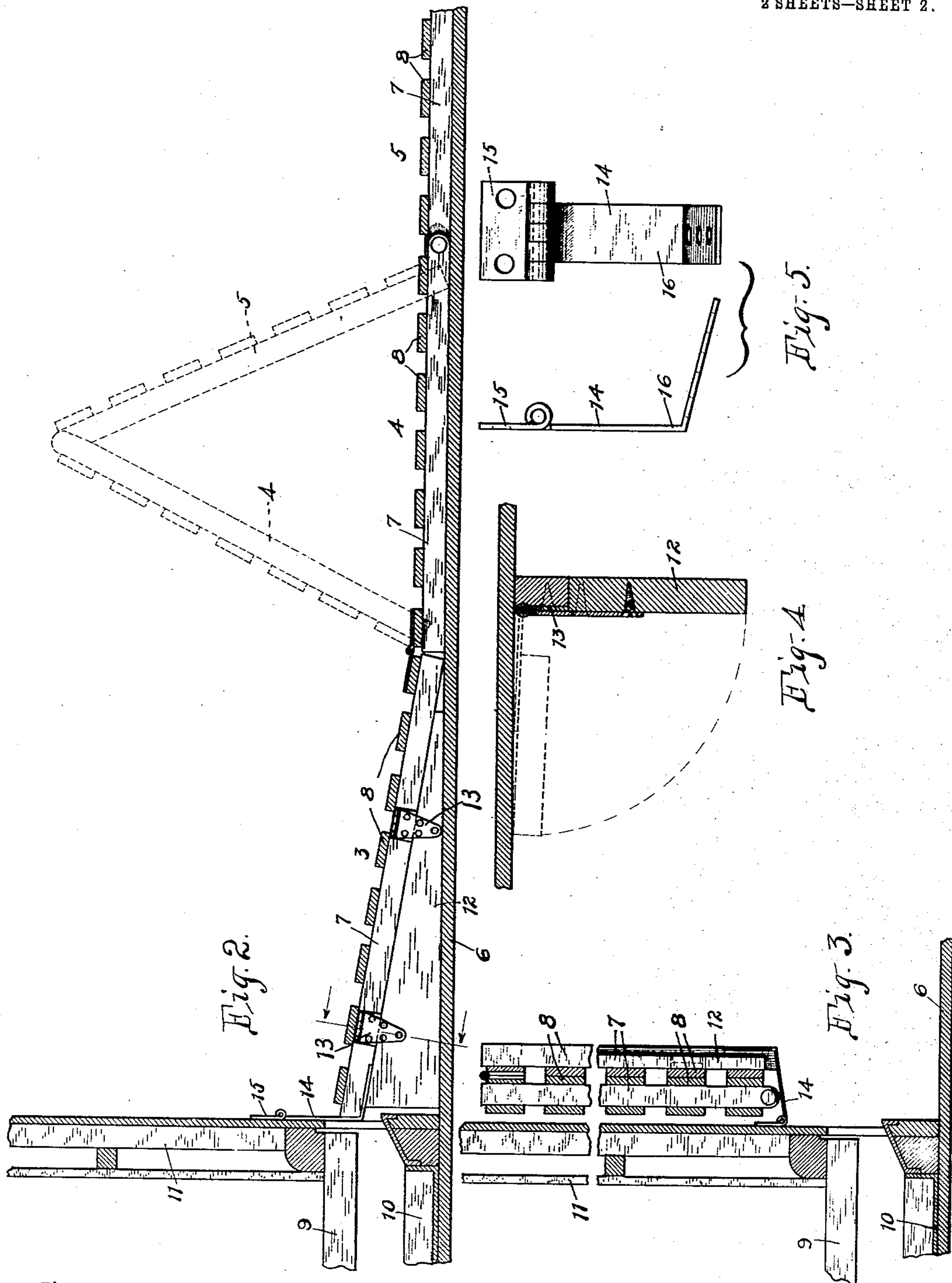
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# UNITED STATES PATENT OFFICE.

JOHN M. BORROWDALE AND JOHN STRAIN, OF CHICAGO, ILLINOIS.

## REFRIGERATOR-CAR.

938,958.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed March 8, 1909. Serial No. 481,992.

*To all whom it may concern:*

Be it known that we, JOHN M. BORROWDALE and JOHN STRAIN, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Refrigerator-Cars, of which the following is a specification.

Our invention relates to improvements in refrigerator cars, and more particularly to an improvement upon the construction disclosed and claimed in the application of John Strain, one of the above named applicants, filed on the 17th day of November, 1908, and given Serial Number 463,111, an object of the invention being to provide improved mounting for hinged floor sections, whereby a free circulation of cold air is insured below the floor, and which will enable the floor sections to be folded together at the ends of the car.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations, and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1, is a fragmentary view partly in horizontal section and partly in plan illustrating our improvements. Fig. 2, is a view in longitudinal section showing in full lines the floor in normal position, and in dotted lines partly folded. Fig. 3 is a fragmentary view corresponding to Fig. 2 but showing the floor in folded position. Fig. 4, is an enlarged fragmentary view in cross section through the end floor section illustrating the mounting for a side apron, and Fig. 5, illustrates the hinges employed in securing the platform to the wall of the refrigerating compartment.

1 represents the side of a refrigerator car, and 3, 4 and 5, illustrate three sections of our improved slatted floor. It is to be understood that Fig. 1 illustrates less than one-half of a floor in which there are preferably six sections, and are of a width to extend practically from side to side of the compartment, and when the several sections are down upon the permanent floor 6, they will cover the entire length of the compartment. All of the sections are made up of a series of longitudinal stringers 7, upon which the transverse slats 8 are shown. The stringers 7 of the several sections are not in aline-

ment, so as to permit them to lie side by side when the sections are folded, and enable the sections to be folded into small compass at the ends of the compartment.

9 illustrates an ice supporting platform, and 10 a drip pan beneath the same.

11 illustrates an end of the wall of the refrigerating compartment, separating the same from the ice compartment, and having an opening in its lower end extending throughout the width of the car to permit the free circulation of cold air from the ice compartment to the refrigerating compartment, and this passage of cold air is directly below the slatted floor.

To the stringers 7 of end section 3, triangular aprons 12 are connected by hinges 13, the latter having long and short leaves as clearly shown in Fig. 4, and secured to the inner faces of the stringers and aprons, so that the aprons may be swung into a position between the stringers and allow the floor sections to be folded closely together. These triangular aprons support the platform section 3 at an incline as shown in Fig. 2, the extreme end of the section being sufficiently high so as to permit open communication between the ice compartment and the space below the floor. The extreme end of section 3 is connected by hinges 14 with the wall 11. These hinges as clearly shown in Fig. 4, comprise short leaves 15 to be secured to the wall 11, and long leaves 16 bent at an angle and adapted to be securely bolted to the section, preferably to the stringers of section 3. By means of a hinge of this character having the long leaf portions 16, sufficient room is provided to accommodate the sections 4 and 5, between the section 3 and the wall 11, and allow them to be maintained in a vertical position when folded.

The manner of folding is illustrated in dotted lines in Fig. 2, so that the section 4 swings upward and then downward upon section 3, while section 5 swings so that its end face will bear against the end face of section 4.

Various slight changes might be made in the general form and arrangement of parts described without departing from our invention, and hence we do not restrict ourselves to the precise details set forth, but consider ourselves entitled to make such changes and alterations as fairly fall within the spirit and scope of the claims.



Having thus described our invention what we claim as new and desire to secure by Letters Patent is:

1. In a refrigerator car, the combination  
5 with a fixed support, of a series of slatted floor sections, each comprising longitudinal stringers and transverse slats, hinges connecting the floor sections, an ice compartment, a wall separating the ice compartment  
10 from the refrigerating compartment, and having an opening near its lower end to permit the circulation of cold air from the ice compartment to the refrigerating compartment, and one section of said slatted floor  
15 hinged to said wall above said opening, and triangular aprons on said end section supporting said section at an incline.
2. In a refrigerator car, the combination  
20 with a partition wall separating a refrigerating compartment from an ice compartment, and having an opening in its lower portion for the circulation of cold air, a series of slatted floor sections hinged together, and comprising longitudinal stringers and trans-  
25 verse slats thereon, triangular aprons below the stringers of the end floor section, hinges connecting said stringers and aprons, and hinges connecting the stringers of said end

sections with said wall above the opening in the latter.

3. In a refrigerator car, the combination  
30 with a partition wall separating a refrigerating compartment from an ice compartment, and having an opening in its lower portion for the circulation of cold air, a series of  
35 slatted floor sections hinged together, and comprising longitudinal stringers and transverse slats thereon, triangular aprons below the stringers of the end floor section, hinges  
40 connecting said stringers and aprons, and hinges connecting the stringers of said end sections with said wall above the opening in the latter, said latter hinges having short  
45 and long leaves, the short leaves secured to said wall above the opening therein, and the long leaves bent at an angle and secured to the end faces of the stringers of the end section.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN M. BORROWDALE.

JOHN STRAIN.

Witnesses:

JOSHUA R. H. POTTS,  
HELEN F. LILLIS.