

P. DE C. BALL.
REFRIGERATOR CAR.
APPLICATION FILED JUNE 17, 1903.

NO MODEL.

Fig. 1.

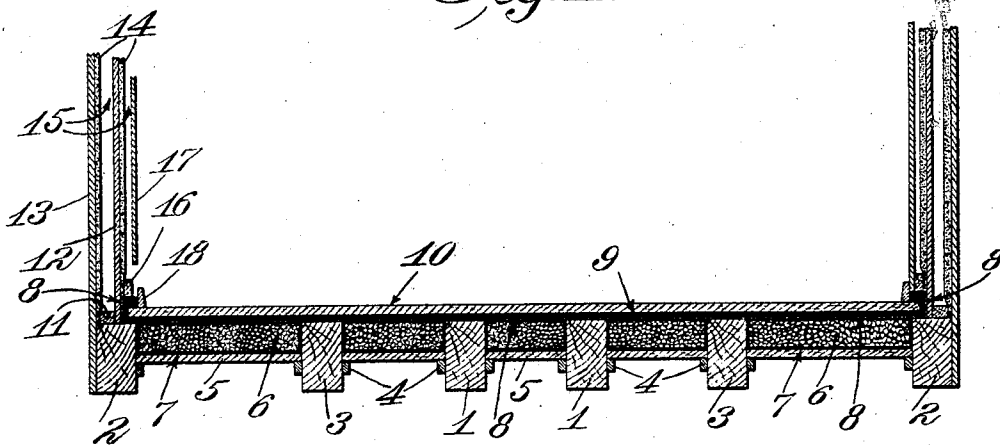
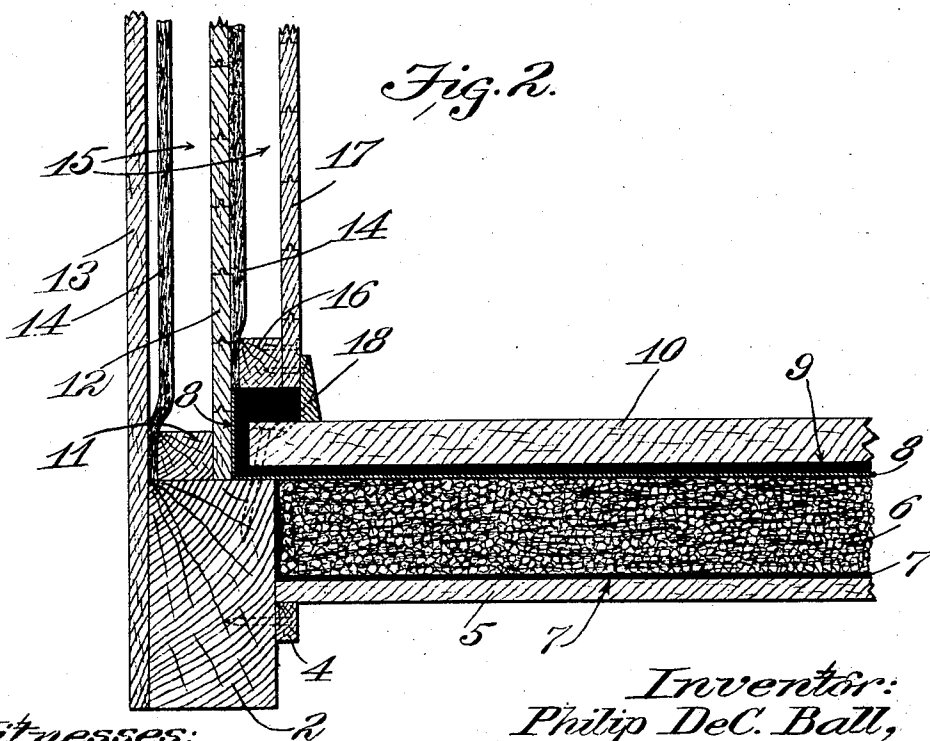


Fig. 2.



Witnesses:
G. A. Pennington
J. H. Gibbs

Inventor:
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UNITED STATES PATENT OFFICE.

PHILIP DE C. BALL, OF ST. LOUIS, MISSOURI.

REFRIGERATOR-CAR.

SPECIFICATION forming part of Letters Patent No. 754,039, dated March 8, 1904.

Application filed June 17, 1903. Serial No. 161,813. (No model.)

To all whom it may concern:

Be it known that I, PHILIP DE C. BALL, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Refrigerator-Cars, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a transverse sectional view of a refrigerator-car provided with my improvement, and Fig. 2 is a similar view showing the parts of Fig. 1 enlarged at the left-hand portion thereof.

This invention relates to a new and useful improvement in railway rolling-stock, and particularly to the construction of what are known as "refrigerator-cars," the object being to arrange a cementitious substance therein to prevent the passage of water from the interior of the car resulting from the melting of ice, &c., therein through onto the sides, ends, and sills, as frequently happens in refrigerator-cars as now constructed.

Referring to the drawings, 1 represents center sills, 2 the side sills, and 3 intermediate sills, which are herein shown as formed of wood, though any form of sills, either of wood or metal, or both, may be used, if desired. Secured to the sills and extending longitudinally thereof are nailing-strips 4, to which are secured short subfloor-sections 5, extending between said sills. Supported by the subfloor-sections 5 and extending substantially to the upper plane of said sills is a filler 6, preferably of ground cork or any other suitable light material which is a poor conductor of heat, said material in this instance being saturated with asphaltum or cementitious material. Between the subfloor 5 and the filler 6 is a coating of pitch or any suitable cement 7, which is continued along the inner faces of the sills substantially to the upper edges thereof, while upon the filler 6 is a layer 8, of tarpaper or any other impervious substance, which extends, as shown in Fig. 2, upwardly of the lining 12 to the nailing-strips 16.

9 is a filling of asphalt or other material,

which is placed in position above the tarpaper and extends slightly beyond the ends of the flooring 10, which latter is secured in position in any convenient manner, as by nailing to the sills. Above the side sills are nailing-strips 11, to which is secured the lining 12, and between said strips 11 and the outer siding 13 is a layer of felt 14 or other suitable material which is a poor conductor of heat and which is duplicated within the air-space 15 and there secured between the lining 12 and the auxiliary nailing-strips 16, to which latter the inner lining 17 is secured. After the flooring 10 is placed in position the nailing-strips 16 and the batten 18 are secured in position before the inner lining is continued down to said strips 16, and through the space (see Fig. 1) left between the strips 16 and the batten 18 hot asphalt or other suitable cementitious or waterproof material is poured, thereby completely filling the space between the ends of the flooring and the lining 12 and also filling the space above the ends of the flooring up to the strips 16, as best shown in Fig. 2, whereby there is provided a perfectly water-tight filler extending below the flooring and for such a considerable distance above the level of the same as will effectually prevent any leakage of fluids to the sills, sides, ends, or lower portion of the linings of the car, which fluids have been found to be very destructive and result in great damage to cars as now constructed.

It will be apparent that the filler 6 may be of any suitable material which is a poor conductor of heat and that live or dead air spaces may or may not be provided, as may be required.

I am aware that minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. In a refrigerator-car, the combination with a supporting-base, of a flooring, a side wall supported upon said base at the edge of

said flooring and spaced from the edge of the latter, a batten upon said flooring and spaced from said side wall, filling material in the space between said side wall and the edge of
5 said flooring and also in the space between said side wall and said batten, and a lining above said filling material and between said side wall and said batten; substantially as described.
10 2. In a refrigerator-car, the combination with supporting-sills, of a subflooring supported thereon, filling material upon said subflooring, a sheet of insulating material upon said filling material, a flooring above said sheet
15 of material and spaced therefrom, a side-lining

having its lower edge above said flooring and spaced therefrom, and waterproofing material between said sheet and said flooring and extending above the edge of the latter to present a portion above said flooring and between
20 said flooring and the lower edge of said lining; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 12th day of June, 1903.

PHILIP DE C. BALL.

Witnesses:

FREDERICK H. GIBBS,
GEORGE BAKEWELL.