(No Model.)

C. S. HARDY.

REFRIGERATOR CAR.

No. 526,969. Patented Oct. 2, 1894.

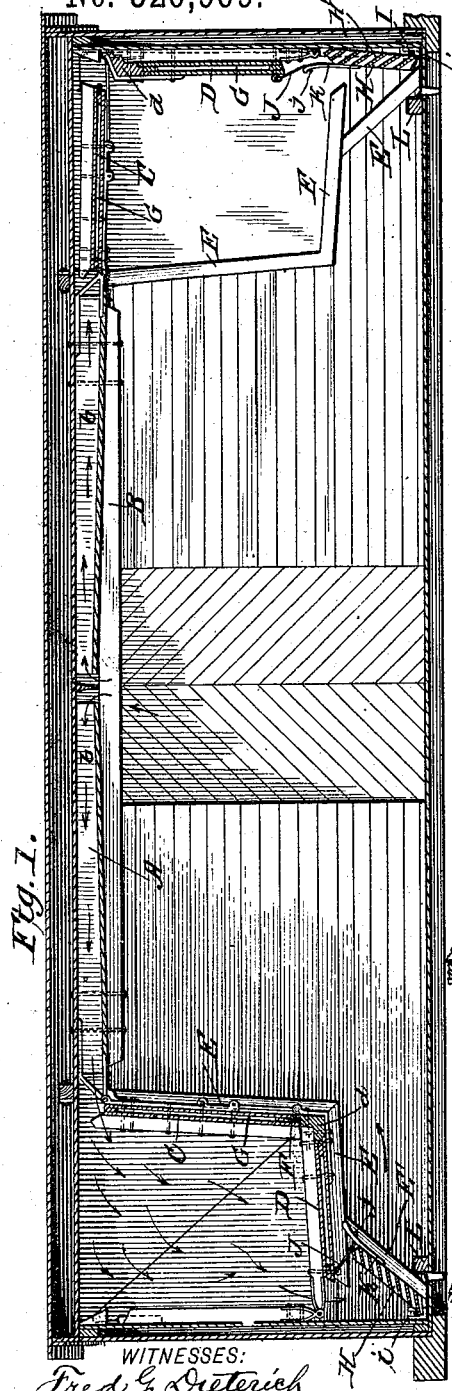

Fig. 1.

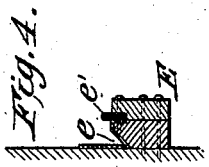

Fig. 4.

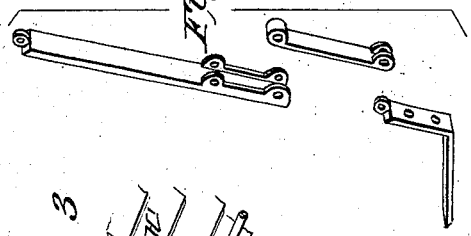

Fig. 5.

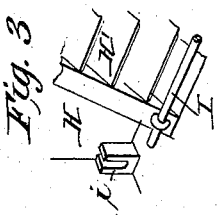

Fig. 3

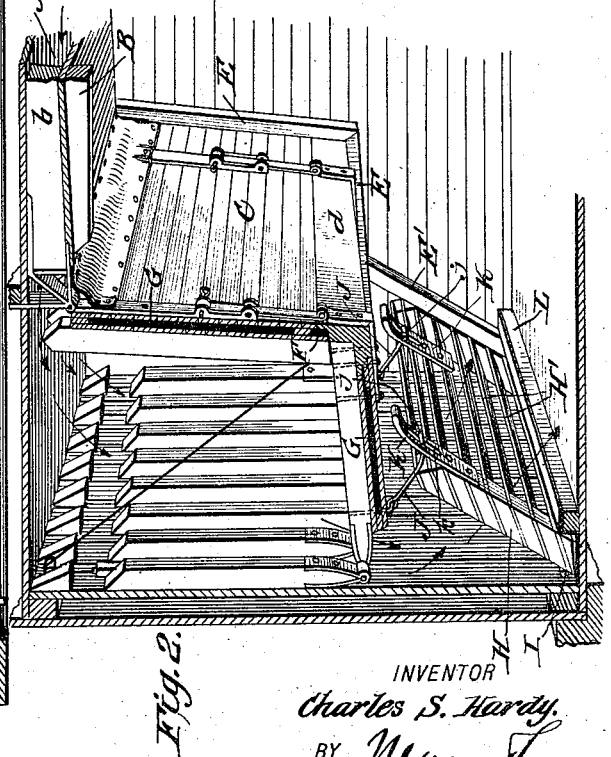

Fig. 2.

WITNESSES:
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UNITED STATES PATENT OFFICE.

CHARLES S. HARDY, OF SAN DIEGO, CALIFORNIA.

REFRIGERATOR-CAR.

SPECIFICATION forming part of Letters Patent No. 528,969, dated October 9, 1894.

Application filed November 21, 1893. Serial No. 491,561. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. HARDY, of San Diego, in the county of San Diego and State of California, have invented a new and useful Improvement in Refrigeration and Storage, of which the following is a specification.

My invention is an improvement in apparatus for refrigeration and storage and relates especially to that class of such apparatus in which it is desirable at one time to provide means for supporting ice or other refrigerating agents and at other times to fold such ice supporting means out of the way to afford more space when refrigeration is not desired, and the present invention seeks among other improvements to provide constructions by which to economize ice and to prevent the drippings from such ice soiling the contents of the car, to avoid clogging of the drain pipe and to secure a simple and secure folding, unfolding and supporting of the several folding parts.

To these ends the invention consists in certain novel constructions, combinations and arrangements of parts as will be hereinafter described and pointed out in the claims.

In the drawings—Figure 1 is a vertical longitudinal section of a car provided with my improvements the ice box sections and drain guard being folded at one end of the car and unfolded or opened to position for use at the opposite end. Fig. 2 is an enlarged perspective view of one of the ice boxes. Fig. 3 shows a part of the drain guard in detail. Fig. 4 is a cross section of the cleat, and Fig. 5 is a detail view of the hinge.

In the construction shown I provide beneath the ceiling of the cars longitudinally extended flues A whose inlet ends are arranged on opposite sides of a line drawn centrally between the ends of the car and whose bottoms incline downward from such inlet ends toward their outlets into the ice boxes.

To brace the flues and the top of the car against the weight of the ice boxes and their contents I provide below the flue a truss brace B extending from the outlet or discharge end of one flue along both said flues to the outlet end of the other flue and are bolted firmly to the flues and to the car top as shown. The truss brace is arranged below the center joist or beam *b* of the car and being bolted firmly thereto operates efficiently to give strength and rigidity to the car. The flues conduct the air from the storage space of the car to the ice boxes which latter are formed with the hinged sides C and bottoms D which open outward against the cleats E. These cleats E are secured to the side walls of the car, are provided with gutters *e* which operate to carry off the condensations and in practice these cleats and their gutters are lined with the zinc or other similar side lining of the ice box and are provided with rubber strips *e'* to perfect the sealing the cleats serving thus to seal as well as support the hinged side and bottom or floor of the ice box.

The floor is hinged at one edge to the end of the car and has at its opposite or swinging edge a beam *d* which extends from side to side of the car, and it and the swinging edge of the side wall are formed to fit closely together and a rubber strip F is provided to complete the sealing. Both the side wall and the bottom or floor are formed with dead air spaces G which improve the insulation and permit the sides and bottom to be made of lighter stuff than would be otherwise practicable.

Below the bottom cleats E are arranged the drain guard cleats E' similar to the cleats E and arranged at an incline to the vertical as shown the direction of such inclination being away from the adjacent ends of the car as shown. These cleats E' support the drain guard H when the latter is folded out to position for use. This drain guard is pivotally supported or hinged at its lower edge and is formed with the framing and the cross slats H' separated for the circulation of air and arranged as shown to prevent the drippings from splashing onto the contents of the car. At its lower end the drain guard has pintles I which fit in slotted keepers *i* so the guard may readily swing between folded and unfolded positions and yet can be removed in cleaning the car. In practice the pintles are the ends or other portions of a rod extending from side to side of the drain guard and operating as a cross brace as shown.

In connecting the drain guard with the floor of the ice box I prefer to employ a sliding connection and to construct the same as shown of the two members J and K connected

one with the floor and the other with the drain guard. The member K is slotted longitudinally at *k* and the member J extends through the slot *k* and has at its free end a head or enlargement *j* which bears below the slotted member and holds the parts J and K together.

In practice as the box floor is folded into and out of position for use it operates to correspondingly adjust the drain guard. In addition to preventing the dripping water from splashing on the contents of the car such guard operates to retain sawdust and the like and prevents it from passing to and clogging the outlet drain L and so cause a flooding of the car.

It should be understood that Fig. 2 of the drawings is in the nature of a partial nearly central longitudinal section of a car, showing one half of one of the ice boxes in section. In this view which is drawn just a little to one side of the center of the car I show the central truss beam B. I also show here one set of the connections J, K at the center and one at the farther side. It should be understood that a set of these connections J, K is used at both sides of the drain guard; also that either the side or the central connections but not both may be dispensed with without departing from my improvements.

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

1. In a refrigerating apparatus substantially as described the combination of the ice box or receptacle and a slatted drain guard arranged below the bottom or floor thereof substantially as set forth.

2. In a refrigerating apparatus the combination with the ice box or receptacle, formed with hinged members adapted to fold, of a drain guard arranged below said box and supported to fold or swing into and out of position for use substantially as set forth.

3. In a refrigerating apparatus the combination of the hinged floor of the ice box, the hinged drain guard and connections between the floor and guard whereby the latter will be adjusted by the movements of the floor substantially as set forth.

4. The combination of the ice box having hinged sections, the cleats sustaining such sections and the drain guard and the cleats sustaining such guard substantially as set forth.

5. In an apparatus substantially as described the combination of the hinged ice box floor, the hinged drain guard and a connection between said guard and floor formed of members sliding one upon the other substantially as set forth.

6. The combination of the hinged ice box side and floor sections, the cleats sustaining the same, the drain guard below the ice box sections, the cleats sustaining said drain guard, and a connection between said guard and the bottom or floor section said connection being formed of members sliding one upon the other substantially as set forth.

7. The combination of the hinged ice receptacle and drain guard having the illustrated rubber or flexible material sealing the joint between its wall and draft flue, the grooved grain cleats provided with rubber or suitable material and sealing the wall floor and drain guard at their ends, the hinged wall being grooved and provided with same or similar material and flush at its free edge, the hinged floor being provided with a beam at its free edge upon which ice cleats rest and are secured, said beam being grooved in such a manner that the wall and floor form a sealed joint and forming a sealed ice receptacle at all points not required for inlet and discharge of air to and from the ice receptacle by its own weight when hinged together and when in an open position substantially as illustrated and described.

8. In a refrigerating apparatus, the combination of the hinged floor of the ice receptacle, the hinged side wall of such receptacle said wall and floor being arranged to abut at their swinging edges when opened and a sealing strip interposed between such side and floor at the joint or abutment of such parts substantially as set forth.

CHAS. S. HARDY.

Witnesses:
HARRY C. HIBBEN,
CHARLES J. BABBITT.

Correction in Letters Patent No. 526,969.

It is hereby certified that in Letters Patent No. 526,969, granted October 2, 1894, upon the application of Charles S. Hardy, of San Diego, California, for an improvement in "Refrigerator-Cars," an error appears in the printed specification requiring correction as follows: In line 73, page 2, the word "grain" should read *drain;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 16th day of February, A. D., 1897.

[SEAL.]

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.

Countersigned:

JOHN S. SEYMOUR,
Commissioner of Patents.