

Aug. 18, 1931.

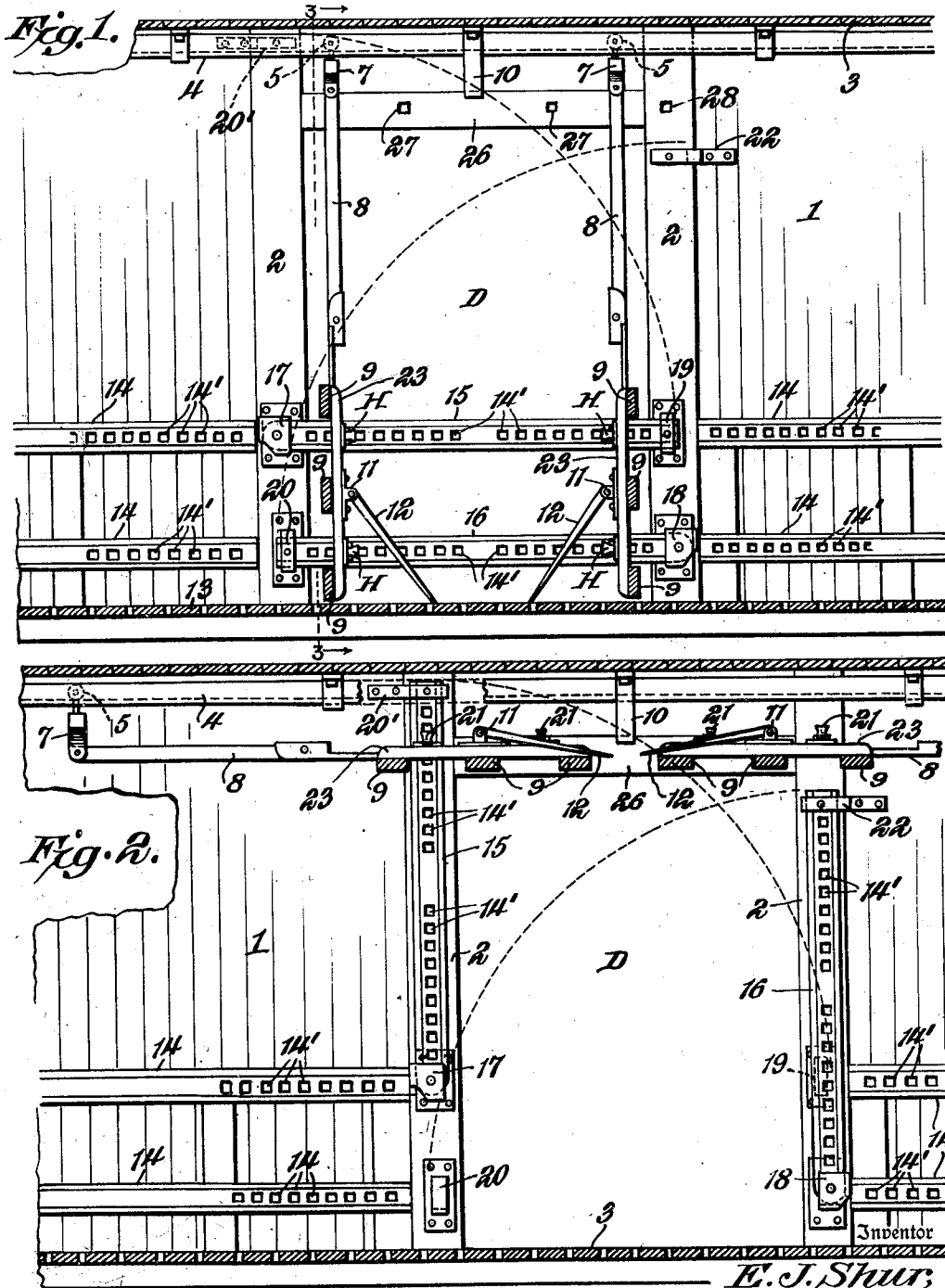
E. J. SHUR

1,819,978

BULK HEAD CONSTRUCTION FOR REFRIGERATOR CARS

Filed Dec. 27, 1929

2 Sheets-Sheet 1



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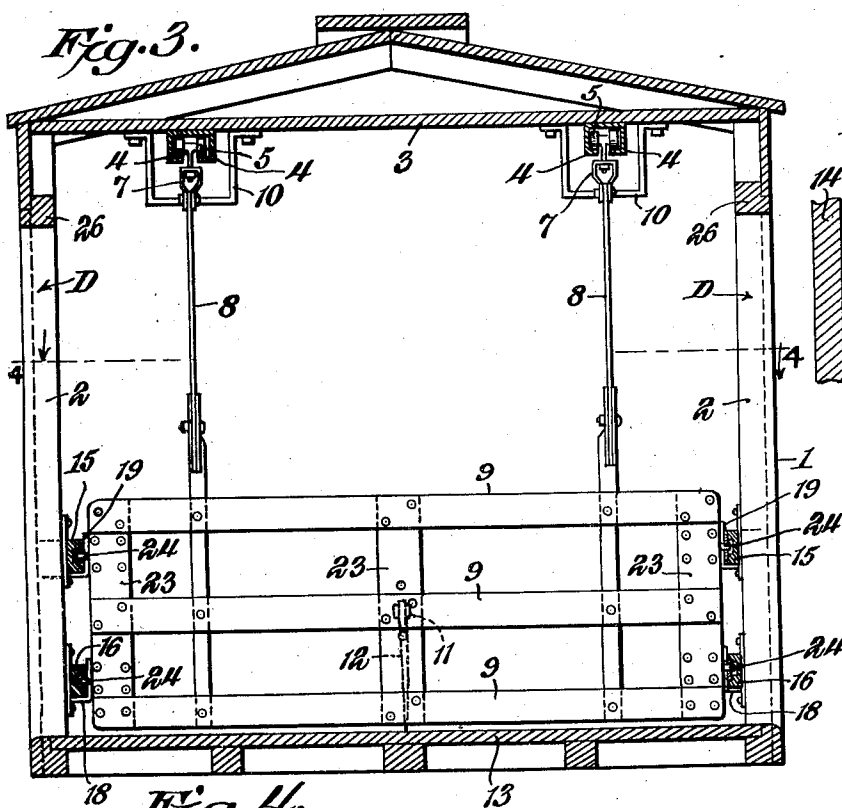
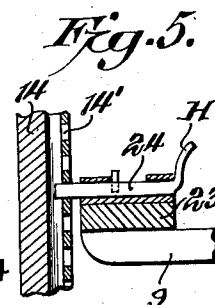
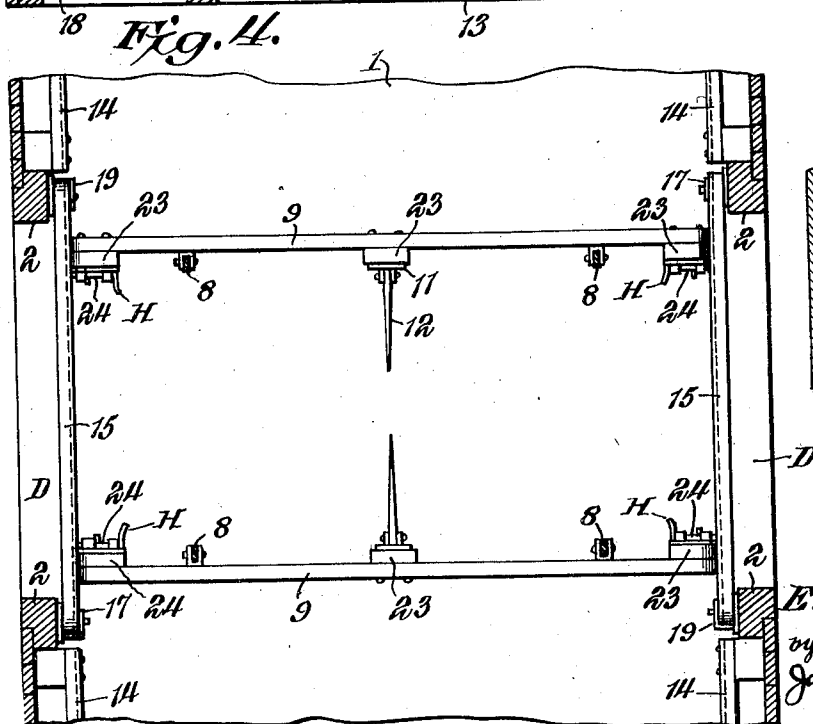
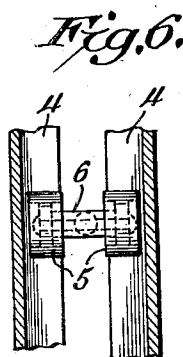
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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BULK-HEAD CONSTRUCTION FOR REFRIGERATOR CARS

Application filed December 27, 1929. Serial No. 416,856.

My present invention pertains to bulk-head construction for refrigerator cars, and it contemplates the provision of a construction designed for use in banana transporting refrigerator cars, particularly but not necessarily and one that embodies relatively arranged elements through the medium of which the cargo in the car may be bulk-headed at any point intermediate the ice compartment and the door of the car whereby chilling and consequent deterioration of the cargo is precluded.

The invention further contemplates the provision of bulk-heading means that are adapted to be swung out of the way and retained in such position when occasion demands.

Other advantageous features of the invention may be fully understood from the following description and claims when the same are read in connection with the drawings accompanying and forming part of this specification, in which

Figure 1 is a longitudinal sectional view of a car showing my novel bulk-head construction arranged therein and in normal position.

Figure 2 is a similar view showing the bulk-head construction thrown out of the way and positioned in the roof of the car.

Figure 3 is a transverse sectional view taken in the plane indicated by the line 3—3 of Figure 1, looking in the direction of the arrows and showing the gates down.

Figure 4 is a view partly in section and partly in top plan showing the device as it appears when looking in the direction indicated by the arrows in the plane 4—4 of Figure 3.

Figure 5 is a horizontal detail sectional view of my novel slide bolt arrangement for assisting in securing the gate with respect to the side bars.

Figure 6 is a detail horizontal sectional view of the track and trolley used in my device.

Similar numerals of reference designate corresponding parts in all the views of the drawings.

The body of the car is indicated by 1 and arranged in the door thereof are the usual posts 2. The door of the car is of the usual construction and secured to the ceiling 3 of the car is a track 4 which in reality is a series of channel-shaped rails that are adapted to be engaged by the trolleys 5. These trolleys are fast on shafts 6 and secured in pivotal manner on the shafts 6 are depending members 7. These members in turn pivotally engage bars 8 that also engage on their lower ends rails 9 that form a portion of the bulk-heading gates. In order to limit the movement of the trolleys with respect to the rails I provide a stop of U-shaped construction indicated by 10.

Preferably the center rails of the gates are provided with members 11 in which props 12 are pivoted and manifestly pressure against the gates will merely tend to force the pointed ends of these props into the floor 13 of the car thereby precluding movement of the gates toward each other with respect to the door opening.

Arranged against the inner wall of the car are rack-bars 14 while pivotally secured to the door frame 2 are rack-bars 15 and 16. These bars 15 and 16 are pivoted at 17 and 18 and when down are normally held in the door opening against casual displacement by means of the keepers 19 and 20. All of the bars 14, 15 and 16 are provided with slots or openings 14' for an important purpose hereinafter set forth. Arranged near the upper end of one door post 2 is a keeper 21 that holds the bar 15 in vertical position while on the other post is a keeper 22 that holds the bar 16 in vertical position.

The end posts 23 of the gate have each a slot therein in which a slide bolt 24 actuatable by the handle H is adapted to be moved into and out of the slots 14' of the nearest rack thereto. A door cross beam 26 is arranged near the ceiling and is provided with openings 27 for a purpose hereinafter noted. An opening 28 is also provided in the frame 2 near its upper end. Manifestly each gate is provided with two sets of slide bolts the purpose for which will be apparent.

In the practical operation of the invention, it is first determined the amount of space to be used by the cargo or the placing of the cargo may be completed and the bars 8 which
 5 engage the rails of the gate are pushed along the tracks to the desired point and then by merely pushing the handle H of the slide bolts 24 to force the bolts into the openings
 10 14' of the rack bar 14 and dropping the props 12 to a position such as that shown in Figure 1 the gates or bulk-heading element will be rigidly held in position against pressure of the cargo. If it is desired to employ
 15 a portion of the door way the bulk-head may be so positioned in the door way by throwing the pivoted racks 15 and 16 into the position shown in Figure 1 and then forcing the slide bolts into the apertures 14' of said pivoted rack. Manifestly the cargo carrying capacity
 20 of the car is increased as heretofore space in the door-way could not be utilized because the bulk-head gates could not be positioned in said door-way.

When it is desired to put the bulk-head
 25 construction out of the way it is merely necessary to release the slide bolts from their rack bar engagement and throw the racks into the position shown in Figure 2. The bars 8 which
 30 are pivoted on the hangers 7 will permit pushing of the bulk-head gates upwardly and when said gates are in a parallel position with respect to the ceiling 3 of the car the slide bolts may be forced into the openings 27 of
 35 the door cross beam 26 and the opening 28 of the frame beam 2. This construction the gates will retain in the position shown in Figure 2.

It will be manifest from the foregoing that the matter of bulk heading a refrigerator car may be accomplished with but a slight
 40 amount of effort and the apparent saving in bulk-head space is a matter of great saving in the shipment of perishable cargo.

What I claim is:—

45 1. In a bulk-head construction, the combination of a car, longitudinal notch bars secured to the sides thereof, other longitudinal side bars pivotally secured to the car, rails longitudinally arranged in the ceiling of
 50 the car, trolleys adapted to travel over the rails, depending bars pivotally arranged in the shaft of the trolleys, gates secured to the depending bars, props pivotally secured to the gates, and slide bolts secured in the
 55 gates and adapted to engage the bars.

2. In a bulk-head construction the combination of a car, longitudinal notched bars arranged in the car; some of said bars being
 60 pivotally secured in the door way of the car, a rack bar having slots therein mounted in the door way below the roof of the car and other rack bars having slots therein, rails arranged in the ceiling of the car, trolleys slidable on the rails, means for limiting movement of the trolleys with respect to the rails,
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depending arms pivotally mounted with respect to the trolleys, bulk-head gates secured to the depending members and means formed on the gates and adapted to engage the
 70 notches of the bars and further adapted to engage the slots of the door beam and frame of the door when positioned parallel with respect to the ceiling of the car.

3. In a bulk-head construction the combination of a car, a doorway therein, a cross
 75 beam secured in the doorway near the upper part thereof and having slots therein, rails arranged in the upper part of the car, trolleys slidable on the rails, means for limiting movement of the trolleys in one direction, depending
 80 arms pivotally secured with respect to the trolley, bulk-heads secured to the depending arms, slide bolts mounted on the bulk-heads, props pivotally mounted to the bulk-heads, rack bars having notches therein
 85 fixedly secured to the car, and other notched rack bars swingably secured adjacent the doorway of the car, said notches of the series of bars being adapted for engagement by the
 90 slide bolts of the gates whereby the bulk-heads may be positioned longitudinally with respect to the car; the said bulk-heads being further adapted for pivotal movement with respect to the trolley whereby they may
 95 be swung to and retained in parallel position with respect to the upper part of the car.

In testimony whereof I have hereunto set my hand.

EDWARD J. SHUR.

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