May 5, 1931. G. F. JONES 1,803,760

OVERHEAD BULKHEAD DROP GATE FOR BOX AND REFRIGERATOR CARS

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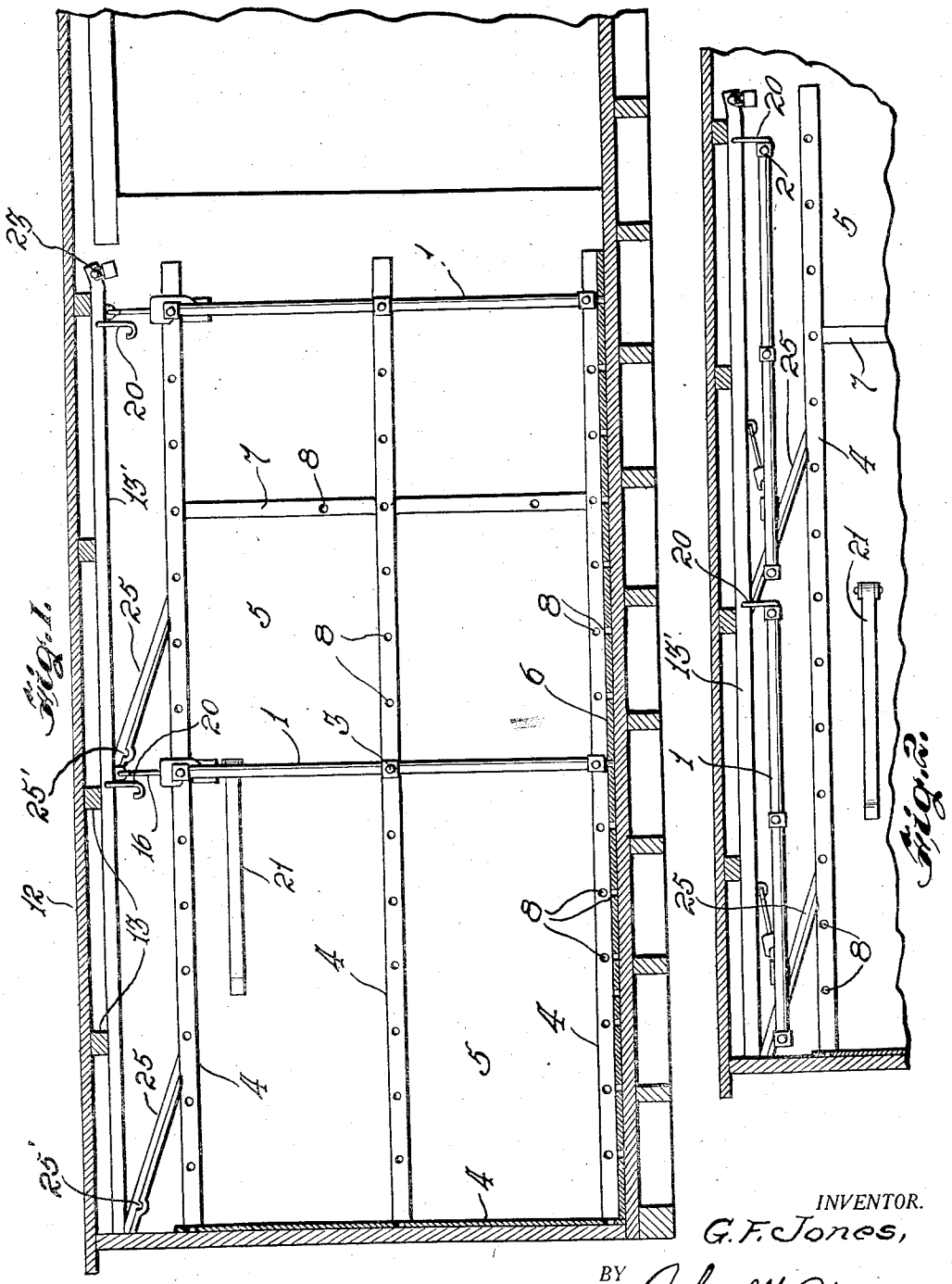


Fig. 1.

Fig. 2.

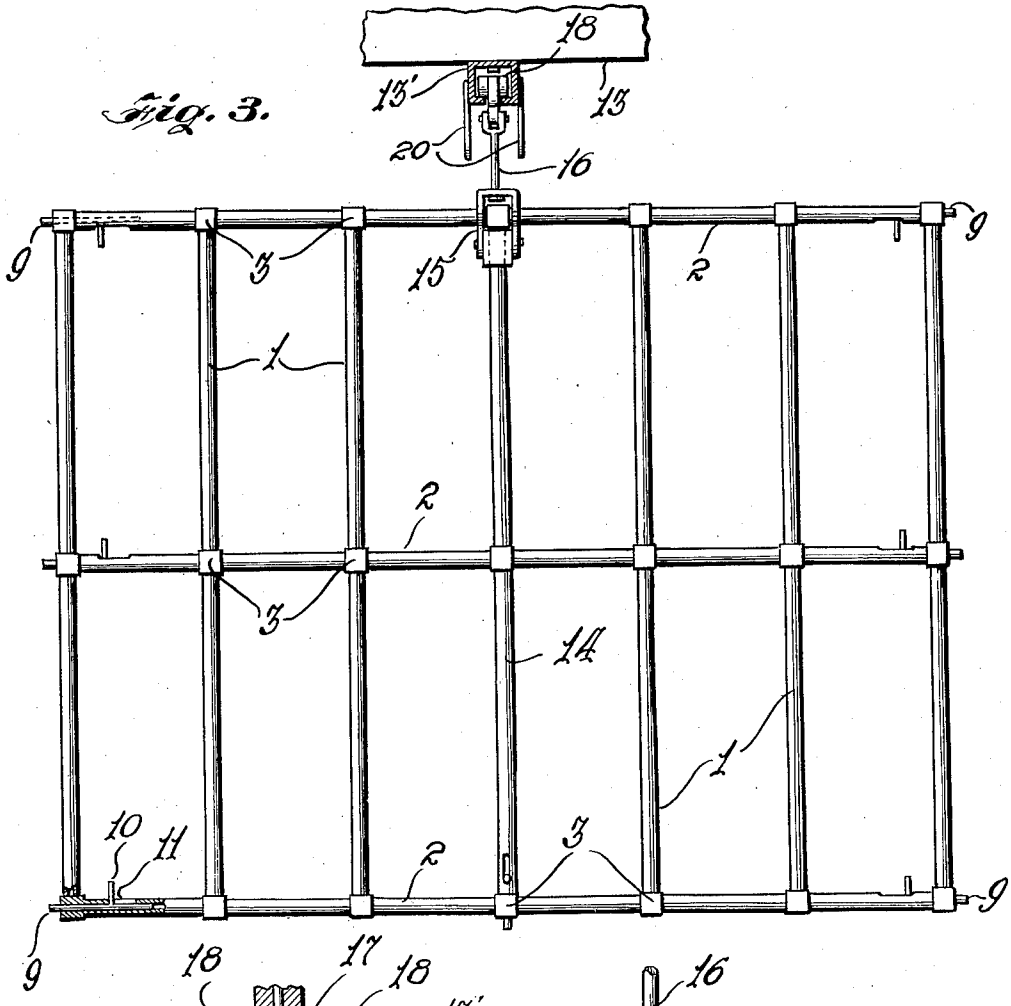
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Fig. 3.



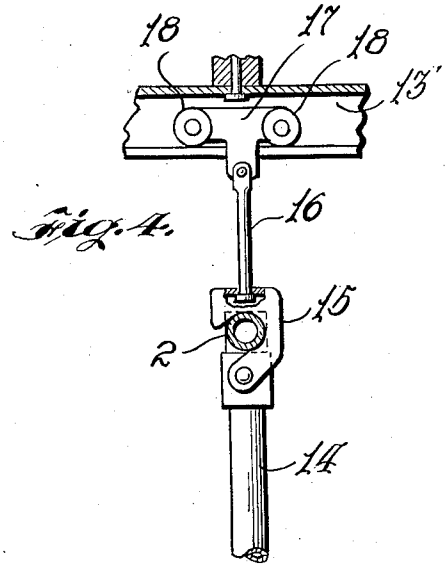


Fig. 4.

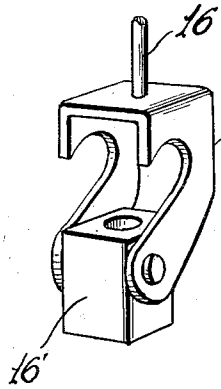


Fig. 5.

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Filed Oct. 11, 1929 3 Sheets-Sheet 3

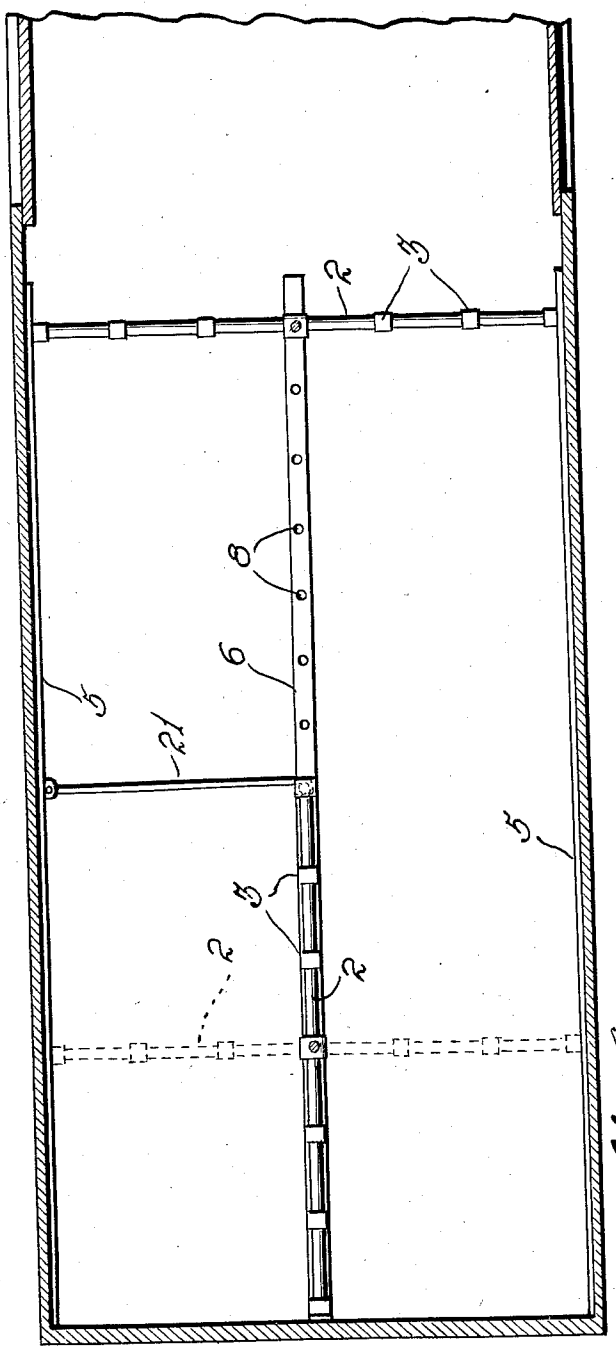


Fig. 6.

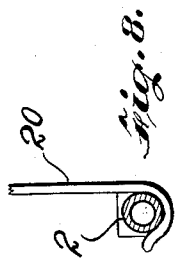


Fig. 8.

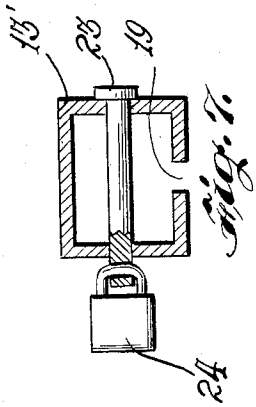


Fig. 7.

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UNITED STATES PATENT OFFICE

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OVERHEAD BULKHEAD DROP GATE FOR BOX AND REFRIGERATOR CARS

Application filed October 11, 1929. Serial No. 398,930.

This invention relates to improvements in railway equipment, more particularly for box and refrigerator cars, and the primary object thereof is the provision of an overhead bulk-head drop gate for such cars.

The purpose of this gate is to obviate the nailing of cleats and blocks to the side walls and floors of cars which cause the frequent replacement of such parts of the car, and to separate or break up a load into five equal parts or more, each part or section being independent of the other.

Another advantage attained by the use of this improved gate is that it does away with the shifting of the car contents and protects the freight, thereby cutting down a percentage of claims.

A further object of the invention lies in the convenience it provides of enabling the conductor to readily locate the freight without moving other parts of the car contents.

With the above and further objects in view the invention will be more readily understood from a perusal of the following detailed description, taken in connection with the accompanying drawings and wherein:

Figure 1 represents a longitudinal sectional view of one-half of a railway freight or box car and illustrating an embodiment of the improved gate.

Figure 2 is a similar view of the upper part of the car showing the gate in inoperable position close to roof.

Figure 3 represents a side elevational view of one of the gates in suspended position, part broken away.

Figure 4 is a detail sectional view of a rail and showing associated therewith the elements for attaching the gate to the rail.

Figure 5 is a perspective view of a swivel, also shown in Figures 3 and 4 for permitting the gate to be swung to various positions while suspended.

Figure 6 represents a horizontal sectional view through one-half of a freight or box car as depicted in Figure 1, and illustrating one of the gates in cross-wise and longitudinal positions in the car.

Figure 7 is a detail sectional view of a locking bolt showing its position on the rail.

Figure 8 is a detail view of a suspension hook for holding the gates in inoperable position such as is shown in Figure 2.

Referring more closely to the drawings, the gate is made up of one inch galvanized iron pipe, or may be of a larger size, and about eight feet in width and seven feet in height, such dimensions of course varying to fit any car according to its loading area. These pipes consist of a number of vertically-disposed and spaced pieces 1 and preferably three longitudinally-disposed cross-pieces 2, joined at their intersecting points 3. There are also provided means for connecting the gate to the side walls and end walls of the car, such means consisting of the elongated bars 4, a centrally-disposed floor bar 6, and an upright bar 7. Each of these bars is provided with spaced holes 8 for connection to the gate. For this purpose the outermost cross-pieces and the central cross-pieces are provided with the slide-bolts 9, with extension pin 10, slidable in the slot 11, as will be apparent, for insertion and removal of the bolts in and from the apertures 8. For convenience in loading any freight that is too long, the gates can be raised a foot or more off the floor and the slide-bolts placed in the apertures in the bar 7.

To the underside of the car roof 12 are the usual cross-beams 13, spaced apart in the usual manner, and to these pieces or beams is secured a trackway or rail 13'. This rail provides a support for the gates suspended therefrom. First there is fastened to the central vertical piece 14 of the gate a swivel hook 15 and connected to the head of the swivel hook is a link 16. The hook also includes a block 16' which is slidable on the piece 14. The link is pivoted to swing from a member 17 on which are mounted the rollers 18, the member 17 adapted to depend through the opening 19 in the rail 13' and the rollers then ride along and upon the inside or floor of the channel rail, clearly shown in Figure 4.

To the rail 13' are secured two hooks 20, one hook for each gate, and above the topmost bar 4 are two sloped pieces 25 with a notch 25'. The hooks and notched pieces 25 provide means for holding the gates in in-

operative position when not in use, and it will be apparent that the upper and lower cross-pieces of the gates rest in the hooks and in the notches in the pieces 25, clearly shown in Figure 2.

The gates are also capable of use lengthwise of the car, as well as cross-wise, and as shown in Figure 6, the broken lines showing the gate in a cross-wise position and the full lines the lengthwise position of the gate. For the latter position there is used and provided a bar 21 swingable from the wall 5, which acts as a brace for the gate.

The rail 13′ can be locked by the bolt 23 and a padlock 24 placed thereon, this being shown in Figure 7.

In Figure 2 is shown the gates in inoperative position, and to bring this about the hook of the swivel 15 is moved out of alinement with the block 16′, allowing the block to be slid along the piece 14 so that the cross-piece 2 can rest in the notch 25′ in the piece 25, then the other cross-piece is supported in the hook 20.

From the foregoing it will now be understood that the gate provides a construction capable of taking care of any kind of freight. Where two or more people are shipping household goods the commodity can be separated and section number shown, thereby keeping shipments intact and free from getting mixed with other goods. If loaded barrels or stoves need extra protection, instead of using blocks and nails, the steel bars on the sides of the car can be used to fasten or tie wire or straps to. The first two gates at the entrance of the car will also act as a support for automobile shipments. From the construction it will also be apparent that the gates can be swung easily on the swivel hook 15.

When goods are loaded in this manner, the checker will note on the waybill the number of section wherein was loaded certain goods and the conductor will have no trouble in locating same when destination is reached. A valuable shipment of any kind can be locked and sealed by means of the bolt 23 and padlock 24.

Manifestly, the structure is also capable of modifications and alterations, such as will be within the scope and meaning of the appended claims.

What is claimed as new is:

1. A gate for the purpose described in combination with a railway freight car, comprising a trackway support from which the gate is suspended and adapted to ride; swivel means for enabling the gate to be swung from a cross-wise to a length-wise position of the car from said support; means for spacing the gate in the car according to car contents; said means including side wall and floor elements to which the gate is removably attached; and means for suspending the gate on a plane higher than normal loading conditions required in loading certain kinds of freight.

2. In combination with a railway freight car, a plurality of gates as set out in claim 1, said trackway disposed centrally of and in the top of the car and capable of suspending a number of gates according to car dimensions to divide the car into compartments for freight according to station location; each gate including means of connection to said trackway so as to permit each gate to swing in swivel fashion and to occupy a position side-wise or lengthwise of the car according to requirements of freight loaded; and a movable element for supporting the gate in rigid relation with the car when the gate is placed in said lengthwise position; said gates capable of being swung out of the way when not required and means for supporting the gates in such position and means for locking said trackway.

3. A gate as described in claim 1 and wherein the gate has a pivotal connection with said support and roller means on said connection enabling the gate to travel along the support; upright bars with apertures for a support for suspending the gate in a higher than ordinary loading position for freight of unusual dimensions; and means for enabling the gate to be swung out of operative position near the top of the car.

In testimony whereof I affix my signature.

GEORGE F. JONES.