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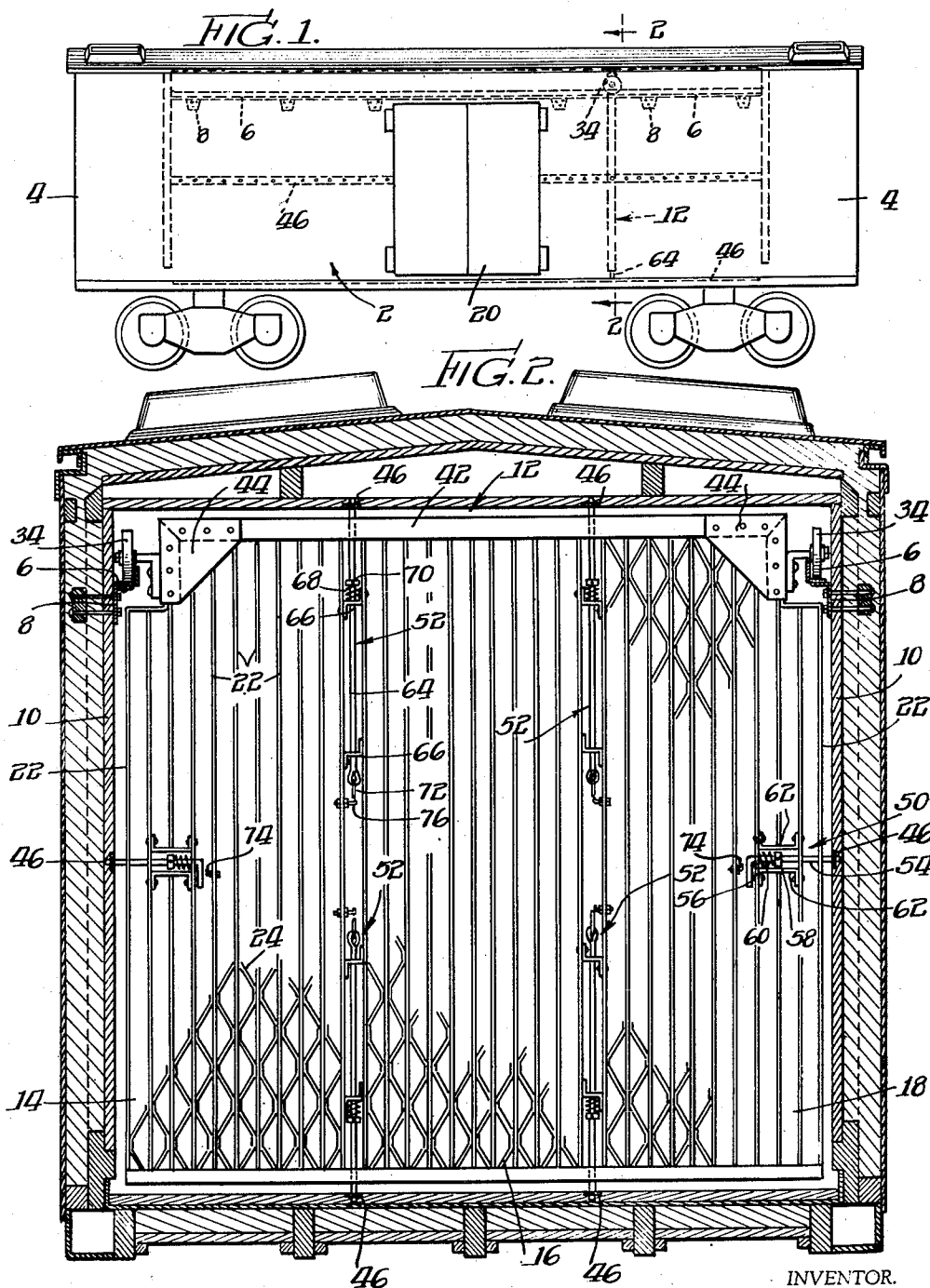
H. C. DIXON

2,227,807

BLOCKING PARTITION FOR RAILROAD CARS OR THE LIKE

Filed March 31, 1938

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

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UNITED STATES PATENT OFFICE

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BLOCKING PARTITION FOR RAILROAD CARS
OR THE LIKEHarold C. Dixon, Chicago, Ill., assignor to North
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poration of Illinois

Application March 31, 1938, Serial No. 199,198

3 Claims. (Cl. 105—376)

This invention relates to adjustable load bracing or partitioning means for railroad cars or the like.

5 An object of the invention is to provide a reliable and efficient partition which will effectively hold the load against shifting during transit, and which is of simple and economical construction.

10 Another object of the invention is to provide a partition of the above stated character which will allow free air circulation between the compartments formed by the partition and thus not interfere with proper refrigeration of the perishable commodities when the partition is employed in a refrigerator car.

15 Applicant's invention further contemplates the provision of means for so mounting the partition that the same may be readily adjusted to substantially any desired point within the car to brace any fractional load or to form a compartment of any desired size.

20 Applicant's invention further contemplates the provision of means which may be readily secured to the partition to cover the same and thereby prevent circulation of air through the partition, as where only a portion of the car is to be refrigerated.

25 Another object of the invention is to provide simple and effective means cooperatively associated with the partition and the walls of the car or the like to releasably lock the partition in each of its adjusted positions.

30 Other and further objects and advantages of the invention will be apparent from the following description when taken in connection with the drawings, wherein:

35 Fig. 1 is a diagrammatic view in elevation of a railroad car embodying the invention.

40 Fig. 2 is an enlarged, transverse, vertical section taken substantially along the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary view in perspective of the gate and its mounting and locking means.

Fig. 4 is a fragmentary, vertical section taken substantially along the line 4—4 of Fig. 3.

45 Fig. 5 is a fragmentary, perspective view of a modified form of locking means.

Fig. 6 is a fragmentary view in perspective showing a modified plan of supporting the floor locking bars.

50 Fig. 7 is a fragmentary, vertical section taken longitudinally of the railroad car and showing means for preventing the circulation of air through the partition.

55 As shown in Fig. 1 of the drawings, the railroad car 2, which may be of the refrigerating

type having refrigerating bunkers 4 at opposite ends, is provided with longitudinally extending angle bars 6 secured by brackets 8 to the opposite side walls 10. The partition denoted generally by the numeral 12 preferably comprises a metal lattice frame work or grille prefabricated in sections 14, 16 and 18 to permit the insertion of the sections through the door 20 (Fig. 1) of the car and their assembling within the car so that when assembled the edges of the partition will lie closely adjacent the side, top and bottom walls of the car.

Each section of the partition preferably comprises a plurality of vertical bars or strips 22 secured together by zigzag bars 24 preferably welded to the vertical bars at spaced points. The outer vertical bars 22 of the sections 14 and 18 are bent inwardly or offset and secured to the third vertical bar 22, as by bolts 26, which bolts also pass through the web of an angle bar 28 20 and a bracket 30. The bracket 30 is provided with a right angularly bent portion 32 on which is journaled a guide roller 34 engaging the guide bars or tracks 6. The upper and lower ends of each vertical bar 22 are bent at right angles to form lugs 36 and 38 to receive suitable bolts 40 25 for attaching the vertical bars to the upper and lower frame members or channels 42. The channel bars 28 at the upper corners of the partition are secured to the upper channel bar 42 by bracing plates or gussets 44 bolted to the vertical flanges of these channel bars.

Locking bars or rails 46, each having a plurality of equally spaced openings 48, are set into the top, bottom and side walls of the car in such manner that the outer surface of the bars lies flush with the surface of the wall lining.

The partition is provided with a plurality of releasable locks or latches 50 for engaging the side walls and a plurality of releasable locks or latches 52 for the top and bottom walls. The latches 50 each comprises a latch bar or rod 54 having a right angularly bent operating handle 56, a collar 58 and a spring 60. The latch bar 54 is slidably mounted in spaced ones of the vertical bars 22 and within a housing formed by U-shaped straps 62 riveted or otherwise secured to these vertical bars 22. The U-shaped straps 62 also provide means to which the intermediate bar 22 may be secured in proper spaced relation to the alternate bars 22 through which the latch bar 54 extends. The spring 60 is interposed between the collar 58, which is secured to the latch rod 54 and the inner one of the vertical bars 22 and therefore normally urges the latch 54 into 55

locking engagement with the latch bar 46 mounted in the side wall of the car.

The releasable locking or latching means 52 each comprises a vertically extending bar or rod 64 slidably mounted in spaced brackets 66 riveted or welded to adjacent vertical bars 22. A spring 68, interposed between the outer bracket 66 and a collar 70 secured to the rod 64, normally urges the rod into locking engagement with the associated bar 46. An operating ring, chain or the like 72 is secured to the inner end of the latch rod 64 whereby the latch rod may be moved against the force of the spring 68 to release the latching means.

A hook 74 may be associated with each latch 50 to engage its handle 56 and retain the latch in released position against the action of its spring 60. Similarly each latching means 52 may be provided with a pin 76 secured to a vertical bar 22 beneath the operating ring 72 to engage said operating ring and retain the latch rod 64 in released position as against the action of its spring 68.

The offsetting of the bars 22 to receive the guide rollers and tracks permits the partition to be made of substantially the same dimensions as the interior dimensions of the car whereby the partition will substantially extend entirely between the side walls and between the top and bottom walls.

As previously stated, the grille or partition is prefabricated in three separate sections to permit the ready insertion of the sections through the door of the railroad car, which, in the case of a refrigerating car, is generally four feet by six feet. After the sections have been placed in the car they are bolted to the upper and lower horizontal frame members or channels 42 by the readily removable bolts 40 and the assembled partition is then hung upon the longitudinal tracks 6. In order to facilitate the hanging of the partition upon the tracks, the tracks may be terminated a short distance from one end of the car or the guide roller or roller brackets may be left off the outer sections until the sections have been assembled and the partition placed in proper vertical position for hanging on the longitudinal tracks, and the roller and roller brackets may then be bolted to the assembled partition and the same lowered upon said tracks for rolling adjustment therealong.

The partition, by reason of its grille-like or lattice construction, is particularly effective as a means for holding the load against shifting while at the same time permitting free circulation of air between the compartments formed by the partition and thus not impair refrigeration.

In some cases a more precise setting of the partition may be desired. In such an event the perforated bar 46 may be replaced by an angle bar 78 (Fig. 5) secured to the top, bottom and side walls of a railroad car and provided with ratchet teeth 80 adapted to lockingly engage a dog 82 secured to a rotatable latch rod 84 journaled in spaced ones of the vertical bars 22 or in suitable brackets (not shown) similar to the brackets 66 (Fig. 2). The latch rod 84 is provided with an operating handle 86 with which is associated a spring 88 normally urging the dog 82 into locking engagement with the ratchet or rack 80. Spaced rings 90 and 92 may be provided to receive the operating handle 86 to thereby retain the latch rod 84 and dog 82 in their locked position and in their unlocked position.

Refrigerator cars are commonly provided with

floor racks which hold the load above the floor surface of the car to insure the sufficient circulation of air for the proper refrigeration of the entire load. Where the partition of this invention is employed in connection with a refrigerator car having such floor racks, the floor locking bars 46 may be embedded or set into the longitudinally extending beams or bars 94 of the floor rack 96 (Fig. 6).

Where it is not desired to embed the locking bars in the floor racks, the side walls of the car may be equipped with additional locking bars near to the floor level for cooperative association with the locking or latching means 50 located near the bottom of the partition.

It often occurs that the freight or commodity to be refrigerated constitutes only a fractional load for the refrigerator car. In such case refrigeration of the whole car constitutes a waste of refrigerating medium or power. Furthermore, it often happens that the unoccupied space in the refrigerator car might be advantageously employed for transporting any other items of freight if it were possible to prevent refrigeration of the unoccupied space.

In Fig. 7 the adjustable partition 12 is provided with a bracket 98 located at each upper corner of the partition and these brackets support a roller or rod 100 on which may be rolled a curtain 102 preferably of canvas. Interengaging hooks 104 and 106 may be provided on the bottom edge of the curtain 102 and adjacent the bottom partition 12 to hold the curtain in position covering the partition 12. Suitable means (not shown) may be provided for manually rotating the roller 100 to wind the curtain 102 thereon, or suitable spring means may be provided within the roller for automatically winding the curtain on the roller whenever the hooks 104 are released from the hooks 106.

Since the partition 12 closely approximates the interior dimensions of the car, the canvas curtain 102, in covering this partition, will substantially prevent any circulation of air between the two compartments of the car. Hence by the structure of Fig. 7 it is possible to brace against shifting a fractional load to be refrigerated, and at the same time reduce the space of the car to be refrigerated and simultaneously provide a separate, unrefrigerated compartment in which non-refrigerated items or freight may be stored for transportation.

It will be evident from the foregoing description that applicant has provided a movable partition, easily assembled and installed, which is adapted to brace either a whole or a fractional load, and which as adapted to separate a railroad car into a refrigerated and a non-refrigerated compartment.

Changes may be made in the form, construction and arrangement of the parts without departing from the spirit of the invention or sacrificing any of its attendant advantages, and the right is hereby reserved to make all such changes as fairly fall within the scope of the following claims.

The invention is hereby claimed as follows:

1. An adjustable unitary partition for a railroad car having side walls, a ceiling and a floor comprising a single rigid grille having upper and lower horizontal frame members extending substantially completely across the car, a plurality of flat, spaced straps extending vertically between the upper and lower frame members and being disposed in planes parallel to the sides of the car, transverse flat strap members extending laterally between the parallel vertical straps in vertically

spaced relationship and being rigidly fixed thereto at regularly spaced points of contact with the vertical straps, the upper frame member being substantially shorter than the lower frame member and the outer vertical bars at the opposite sides of the partition being short of the upper frame member to provide corner recesses, said upper and lower frame members having their outer vertical straps residing in close proximity to the walls of the car, a longitudinally extending guide mounted on the sides of the car and passing through said recess, a supporting axle and roller on said frame for engaging the guide and being disposed completely within said recess, means for locking said partition in any of a plurality of longitudinally disposed positions, said locking means comprising locking bars associated with the top, bottom and side margins of the grille, all of said locking bars being disposed in a plane intermediate the front and rear faces of the partition, the side locking bars extending intermediately through a plurality of said vertical straps and through the lateral margin of the grille for engagement with respective walls of the car, and the top and bottom bars passing intermediately through a plurality of laterally extending straps and being slidable therethrough, and yieldable means oppositely acting against each said bar and a supporting strap for urging the extremity of the bar outwardly of the margin of the grille into inter-engagement with the car.

2. A unitary partition for a railroad car having side walls, a ceiling and a floor comprising a single rigid grille having upper and lower horizontal frame members, extending substantially completely across the car, a plurality of flat, spaced straps extending vertically between the upper and lower frame members and being disposed in planes parallel to the sides of the car, transverse flat strap members extending laterally between the parallel vertical straps in vertically spaced relationship and being rigidly fixed thereto at regularly spaced points of contact with the vertical straps, the upper frame member being substantially shorter than the lower frame member and the outer vertical bars at the opposite sides of the partition being short of the upper frame member to provide corner recesses, said upper and lower frame members having their outer vertical straps residing in close proximity to the walls of the car, a longitudinally extending guide mounted on the sides of the car and passing through said recess, a supporting axle and roller on said frame for engaging the guide and being disposed completely within said recess, means for locking said partition in any of a plurality of longitudinally disposed positions, said locking means comprising locking bars associated with the top, bottom and side margins of the grille, all of said locking bars being disposed in a plane intermediate the front and rear faces of the partition, the side locking bars extending intermediately through a

plurality of said vertical straps and through the lateral margin of the grille for engagement with respective walls of the car, and the top and bottom bars passing intermediately through a plurality of laterally extending straps and being slidable therethrough, yieldable means oppositely acting against each said bar and a supporting strap for urging the extremity of the bar outwardly of the margin of the grille into inter-engagement with the car, and a manually engageable handle on each said bar and disposed within the space between adjacent parallel straps for manually shifting the bar against spring tension.

3. A unitary partition for a railroad car having side walls, a ceiling and a floor comprising a single rigid grille having upper and lower horizontal frame members, extending substantially completely across the car, a plurality of flat, spaced straps extending vertically between the upper and lower frame members and being disposed in planes parallel to the sides of the car, transverse flat strap members extending laterally between the parallel vertical straps in vertically spaced relationship and being rigidly fixed thereto at regularly spaced points of contact with the vertical straps, the upper frame member being substantially shorter than the lower frame member and the outer vertical bars at the opposite sides of the partition being short of the upper frame member to provide corner recesses, said upper and lower frame members having their outer vertical straps residing in close proximity to the walls of the car, a longitudinally extending guide mounted on the sides of the car and passing through said recess, a supporting axle and roller on said frame for engaging the guide and being disposed completely within said recess, means for locking said partition in any of a plurality of longitudinally disposed positions, said locking means comprising locking bars associated with the top, bottom and side margins of the grille, all of said locking bars being disposed in a plane intermediate the front and rear faces of the partition, the side locking bars extending intermediately through a plurality of said vertical straps and through the lateral margin of the grille for engagement with respective walls of the car, and the top and bottom bars passing intermediately through a plurality of laterally extending straps and being slidable therethrough, yieldable means oppositely acting against each said bar and a supporting strap for urging the extremity of the bar outwardly of the margin of the grille into inter-engagement with the car, and a manually engageable handle on each said bar and disposed within the space between adjacent parallel straps for manually shifting the bar against spring tension, one of said parallel adjacent bars having means thereon releasably inter-engageable with the handle to hold the locking extremity of the bar inwardly of the margin of the grille.

HAROLD C. DIXON.

CERTIFICATE OF CORRECTION.

Patent No. 2,227,807.

January 7, 1941.

HAROLD C. DIXON.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 1, second column, line 44, for "collor" read --collar--; page 2, second column, line 57, for the word "as" read --is--; page 3, first column, line 32, and second column, line 14, claims 2 and 3 respectively, for "A unitary" read --An adjustable unitary--; 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 and sealed this 25th day of February, A. D. 1941.

(Seal)

Henry Van Arsdale,
Acting Commissioner of Patents.