Jan. 15, 1963 J. N. OGLESBY 3,073,261

RAILROAD CAR PARTITION DEVICE

Filed Feb. 24, 1960 2 Sheets-Sheet 1

Fig. 1

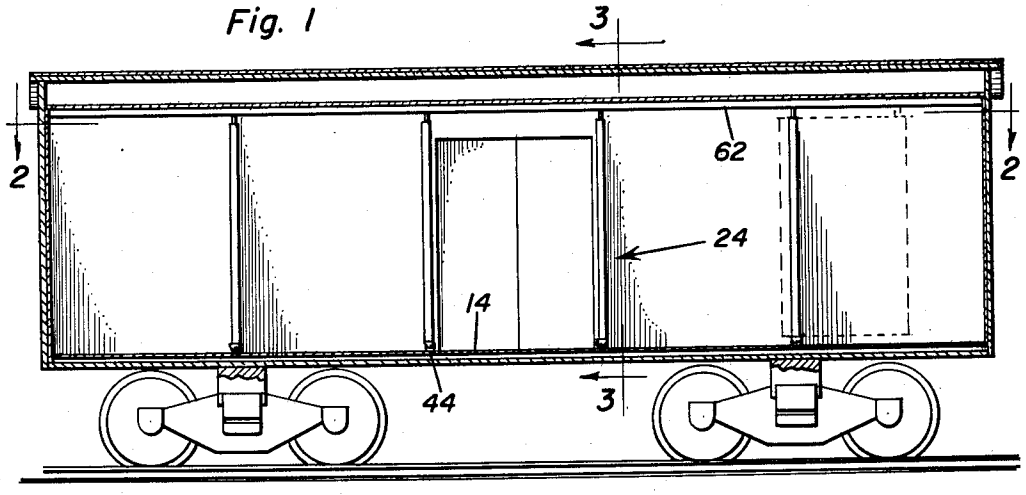



Fig. 2

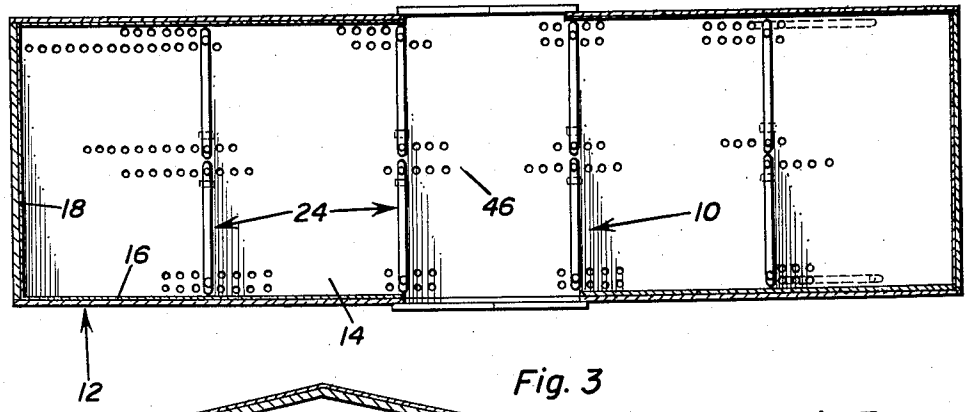



Fig. 3

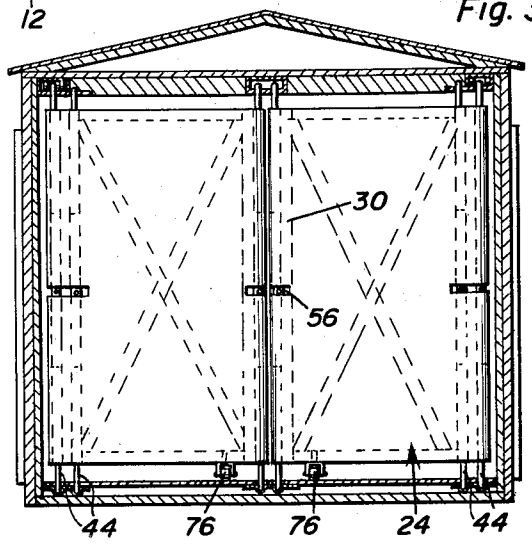
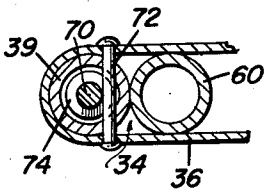



Fig. 7




James N. Oglesby
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

Jan. 15, 1963 J. N. OGLESBY 3,073,261

RAILROAD CAR PARTITION DEVICE

Filed Feb. 24, 1960 2 Sheets-Sheet 2

Fig. 4

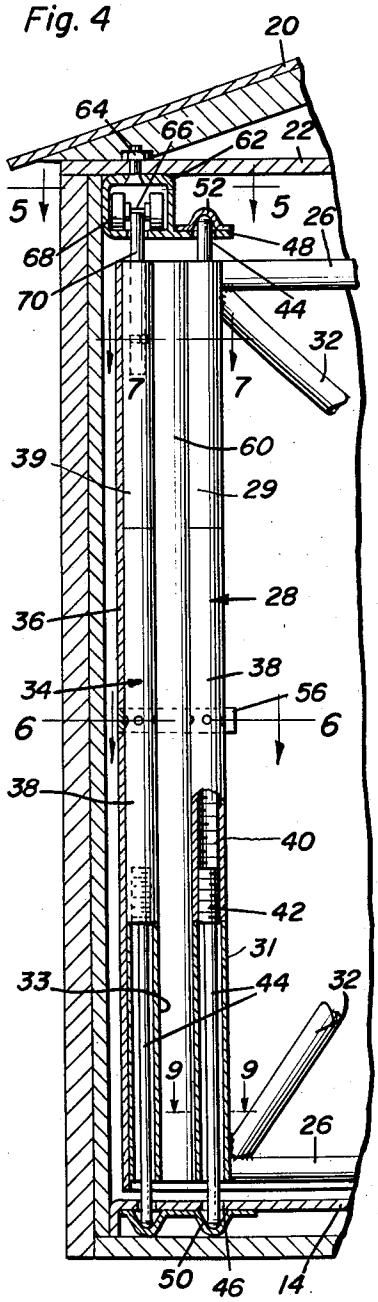



Fig. 10

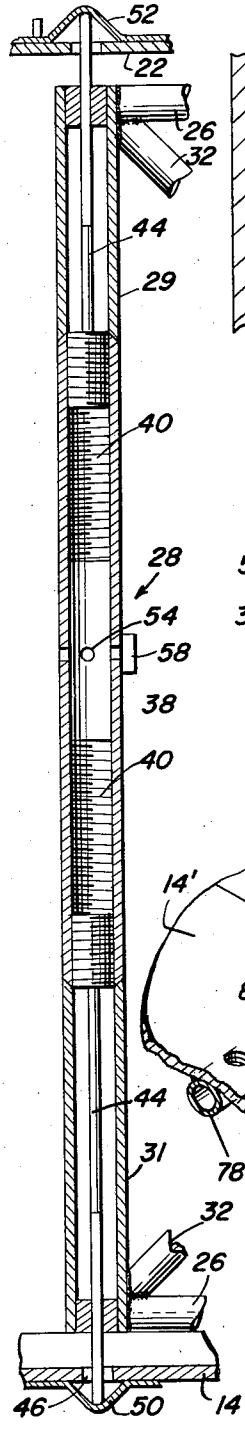



Fig. 5

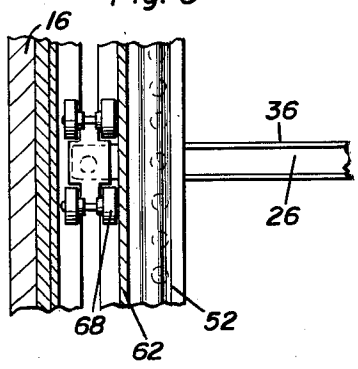



Fig. 6

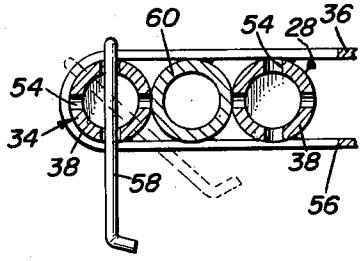



Fig. 8

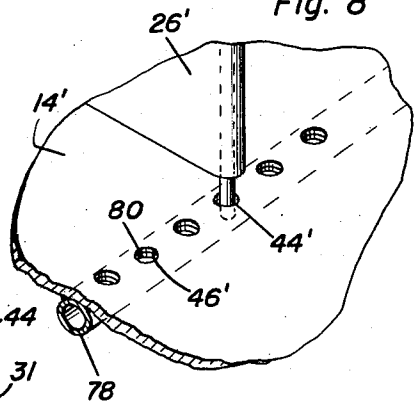
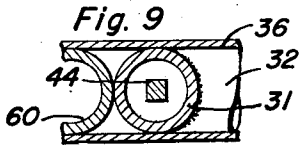



Fig. 9




James N. Oglesby
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

United States Patent Office

3,073,261
Patented Jan. 15, 1963



3,073,261

# RAILROAD CAR PARTITION DEVICE

James N. Oglesby, Elizabeth City, N.C.
(820 N. Broad St., Edenton, N.C.)

Filed Feb. 24, 1960, Ser. No. 10,697
4 Claims. (Cl. 105—376)

The present invention generally relates to an attachment for freight conveyances such as a railroad car and more particularly to a device for partitioning the load carrying area of such a freight conveyance into a plurality of compartments.

One of the major problems in carrying freight, especially in railroad cars, is the shifting of the articles within the freight car in relation to each other due to vibrations and forces exerted on the articles during makeup of the train and during other normal handling procedures for the railroad car. Considerable damage claims occur due to damage caused by the articles when they shift in relation to each other or in relation to the freight car. Another problem existent in the shipment of goods by rail is the fact that quite often a consignor only desires to ship a partial freight car load to a consignee. Therefore, it is the primary object of the present invention to provide an adjustable partition device for railroad cars which will partition the interior of the railroad car into a plurality of compartments of an adjustable size to permit a particular consignment to be positioned in a compartment and then partitioned off from the remainder of the freight car with the partitioning device also preventing shifting movement of the articles in the compartments formed thereby for retaining the articles in immovable condition, especially after a portion of the articles have been removed from the freight car.

Another object of the present invention is to provide a partition device in which the adjustment mechanism and the mechanism for locking the partitions in longitudinally adjusted position are easy to operate but yet sufficiently strong and rigid to withstand the forces exerted by the articles being shipped which are quite extensive and require a positive locking means yet a locking means which is easily operated.

Another feature of the present invention is to provide a partition device which may be swung to an out-of-the-way position alongside of the side wall of the freight car thereby permitting easy access to the entire area of the freight car and rendering the partition device inoperative and compactly stored.

Yet another important factor employed in the present invention is the provision of a partition device which partion device is individually sealable so that each individual consignment in a freight car may be protected by a seal.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout and in which:

FIGURE 1 is a longitudinal sectional view of a freight car illustrating a plurality of the partition devices of the present invention installed therein;

FIGURE 2 is a plan sectional view taken substantially upon a plane passing along section line 2—2 of FIGURE 1 illustrating further orientation relationships of the partition devices;



FIGURE 3 is a transverse, vertical sectional view on an enlarged scale, taken substantially upon a plane passing along section line 3—3 of FIGURE 1 illustrating further structural details of the partition devices;

FIGURE 4 is an enlarged elevational view with portions in section of the means for mounting and locking one of the doors of the partition device of the present invention;

FIGURE 5 is a detailed sectional view taken substantially upon a plane passing along section line 5—5 of FIGURE 4 illustrating the track and carrier construction for the partition devices;

FIGURE 6 is a detailed sectional view taken substantially upon a plane passing along section line 6—6 of FIGURE 4 illustrating the structural details of the mechanism for extending and retracting the locking mechanism;

FIGURE 7 is a detailed sectional view taken substantially upon a plane passing along section line 7—7 of FIGURE 4 illustrating the manner in which the carrier is attached to the door for rotation in relation thereto;

FIGURE 8 is a fragmental perspective view illustrating an all steel form of floor construction for receiving the locking mechanism on the door;

FIGURE 9 is a fragmentary view in horizontal section on an enlarged scale, taken substantially on the line 9—9 of Figure 4; and

FIGURE 10 is a vertical sectional view through one of the sectional pipe assemblies.

Referring now specificially to the drawings, the numeral **10** generally designates the partitioning device of the present invention and there are a plurality of partitioning devices located in each freight car generally designated by the numeral **12** which includes a bottom floor **14**, side walls **16**, end walls **18**, a roof **20** and a top wall **22** all of which represent conventional structure except for slight modifications in the bottom **14** and the top wall **22** which are employed for supporting the partitioning devices **10**.

The partitioning devices **10** are each in the form of a pair of swingable doors with each door being designated by the numeral **24**. Each of the doors **24** includes a rigid frame construction constructed of top and bottom pipes **26** and vertical sectional edge pipes **28** and **30** which are interconnected by crossed brace pipes **32**. The outer edge of each door is provided with an additional sectional pipe **34** paralleling the pipe **28** and slightly spaced therefrom. The entire pipe frame is enclosed with a panel or cover of sheet metal **36** or the like thereby providing smooth external surfaces for the doors for engagement by articles within the compartments thereby preventing damage to such articles.

Each of the pipes **28** and **30** and also the pipe **34** is provided with a rotatable central sleeve or section **38** having internal threads **40** therein which engage the threaded inner end portions **42** of extension lock rods **44** in the stationary upper and lower sections **29** and **31** of the pipes **28** and **30** and in the stationary lower section **33** of the pipe **34**, whereby the sleeves **38** act as turnbuckles for extending and retracting the lock rods **44** vertically in relation to the door. The rods **44** are retained at **45** against rotation by any suitable well known means such as that shown in U.S. Patent No. 239,337,

issued March 29, 1881. The lower end of each lower lock rod 44 is rounded for insertion into one of a plurality of apertures 46 in the floor 14 and the upper end portions of the upper rods 44 are engageable in a substantially similar plate 48 secured to the top wall 22. Underlying the floor 14 is a trough-like member 50 which forms a bottom for the lower lock rods 44 and underlies the row of apertures 46. A similar trough-like structure is also provided on the plate attachment 48 and is designated by the numeral 52. This construction provides somewhat of a V-shaped trough for receiving the outer rounded ends of the lock rods thereby securely centralizing the lock rods and retaining them in position. The troughs 50 are open ended so that any material that may be discharged through the apertures 46 into the trough may be discharged from the ends thereof and the troughs may be flushed out if desired.

Each central section 38 is provided with a plurality of diametrically extending bores 54 which are accessible through a slot 56 in the sheet metal cover 36 whereby a suitable tool of a rod-like nature designated by the numeral 58 may be inserted into the diametrically opposed apertures 54 for rotating the central tubular member 38 for extending and retracting the locking rods 44. Also, as illustrated in FIGURE 6, the tubular members 28 and 34 are rigidly interconnected by an intermediate pipe 60 all of which provides rigidity for the door.

The upper plate 48 is attached to the top wall 22 by virtue of it being attached to a downwardly opening channel-shaped trackway 62 secured to the top wall 22 by suitable fastening bolts 64 or the like. The trackway 62 movably supports a carrier 66 having four corner wheels 68 thereon and a depending rod 70 rigid therewith. The depending rod 70 extend downwardly into the stationary upper section 39 of the pipe member 34, and is attached thereto rotatably by provision of a transverse pin 72 in the member 39 (FIGURE 7) received within a groove 74 formed circumferentially in the rod 70 thereby permitting rotation of the section 39 on the rod 70. The members 33, 39 and 60 may be secured in the sheet metal cover 36 in any suitable manner, as by welding.

The inner lower edge of each door 24 is provided with a supporting caster wheel 76 for supporting the inner edge of the door when the locking rods are released thereby permitting the door to be swung to an out-of-the-way position alongside of the side walls 16. When the doors are swung to the out-of-the-way position, they may be easily locked in this position by again extending the locking rods so that the lower rods will engage the lower and outermost rows of apertures in the bottom with the upper end of the upper locking rods extending into the trackways 62.

FIGURE 8 illustrates a modified form of locking trough in which the bottom 14' is provided with a plurality of apertures 46' and the bottom floor 14' is of all steel construction. A cylindrical member 78 is rigidly secured under the floor 14' and forms somewhat of a sub-floor and adds rigidity to the floor 14' and the rods 44'. The cylindrical member 78 is provided with apertures 80 aligned with the apertures 46' for receiving the locking rods 44' as illustrated in FIGURE 8 thereby providing further rigidity to the locking rods by virtue of the rods going through apertures both in the bottom 14' and in the cylindrical member 78.

With this construction, each of the doors is rigidly attached or locked in position at the four corners thereof when in operative position in perpendicular relation to the side walls. Note that the hinge axis for pivotal movement of the doors is spaced from the inner lock bolts or rods so that the inner lock rods may extend into the trackway alongside the end of the movable carrier. This enables the door to be swung around to a flush condition with the side wall of the freight car. Actually, the trackway may be provided with notches receiving the upper inner lock rod or a separate apertured rail may be provided for this purpose. The rollers on the carrier will only support the door when the door is unlocked and this carrier enables the doors to be moved longitudinally to any direction within the longitudinal length of the car. When the door is in locked position, the forces exerted thereon will not exert any force whatsoever on the construction of the rollers or carrier since all of the forces will be exerted on the locking rods inasmuch as the locking rods will be extended to rigidly engage the troughs and rows of apertures.

It is pointed out that when the locking rods are retracted, they are completely withdrawn from the apertured plates and the apertures forming the means for receiving the locking rods may be in the form of inserted metal rails or built directly into the bottom plate which forms the bottom of the freight car. The elongation of the carrier, that is, the distance between the sets of rollers or wheels thereon will effectively and movably support the door during its sliding movement even though the door may tilt slightly. The door itself is made so that it is relatively light in weight so that it will not add materially to the net weight of the freight car but has sufficient rigidity and strength to withstand the forces exerted by the material disposed in the compartments formed by the doors when in transverse position.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination, a railroad freight car including a floor, side walls and a top wall, and a partitioning device comprising a transverse door assembly including a pair of doors, longitudinal trackways secured to the top wall immediately adjacent the side walls of the freight car, means movably and pivotally supporting the doors from said trackways, each corner of each door having a vertically extensible locking rod, means mounted on the top wall and floor of the freight car for receiving said extensible locking rods for rigidly and releasably locking the doors in perpendicular relation to the side walls of said freight car and means mounted on the top wall and floor of the freight car for receiving said extensible locking rods for rigidly and releasably locking said doors in position alongside the side walls of the freight car, each of the doors being provided with a supporting roller adjacent the inner lower corner thereof for engaging the floor of the freight car for supporting the door during swinging movement thereof, the vertical pivot edges of the doors being provided with a plurality of vertical tubular members adjacent thereto and enclosing the respective locking rods, each of said tubular members including a central rotatable threaded section, each extensible locking rod having a threaded inner end portion engaging with the rotatable threaded portion of the tubular member whereby the rotatable threaded portions and the locking rods act as turnbuckles fo rextending and retracting the locking rods, said means receiving the locking rods include a plurality of longitudinally extending apertured plates through which the locking rods may extend, each of the plates having a trough on the surface thereof remote from the door for forming a limit for movement of the locking rods and forming a rigid bottoming member for the locking rods thereby rigidly supporting the door in both of its positions.

2. The combination of claim 1 wherein said trough is substantially V-shaped and is open ended for removal of any material dropping through the apertures.

3. The combination of claim 1 wherein said trough is cylindrical in shape and provided with open ends, said

trough having apertures in the upper surface thereof receiving the locking rods.

4. The structure as defined in claim 1 wherein said means interconnecting each trackway and the door supported therefrom includes a carrier swivelly connected to the door, and rollers on the carrier engaging the trackway for movably supporting the door for longitudinal movement in a freight car.



**References Cited** in the file of this patent

UNITED STATES PATENTS

| | | |
|---|---|---|
| 2,517,823 | Angell | Aug. 8, 1950 |
| 2,674,207 | Kerbough et al. | Apr. 6, 1954 |
| 2,911,925 | Adler et al. | Nov. 10, 1959 |
| 3,017,843 | Loomis et al. | Jan. 23, 1962 |