Jan. 12, 1932. G. C. WOODRUFF 1,840,927

HOLDING DEVICE FOR CONTAINERS

Filed Dec. 1, 1930 2 Sheets-Sheet 1

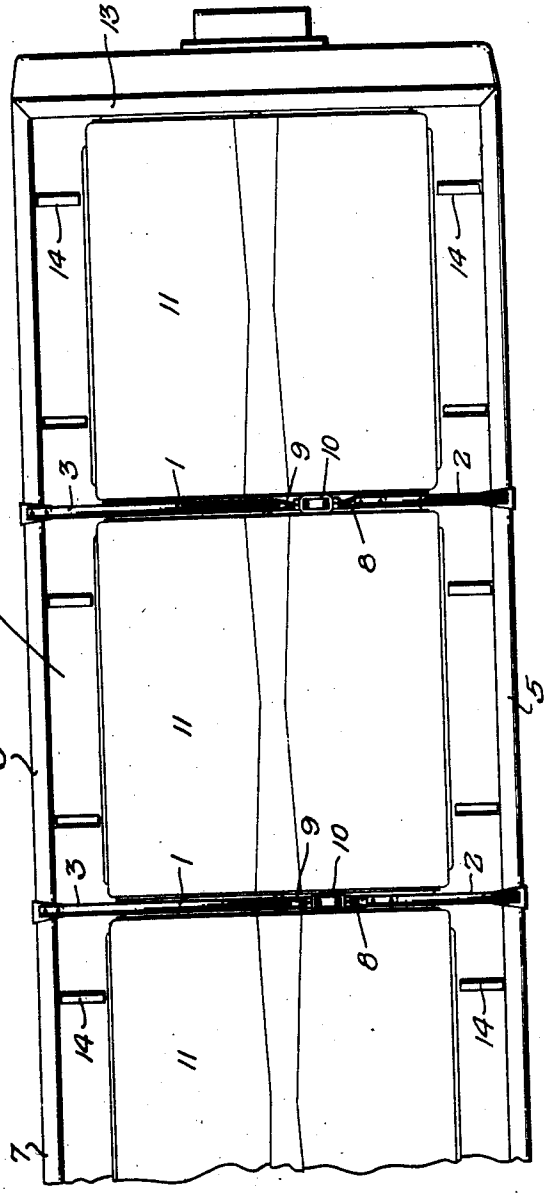


Fig. 1.

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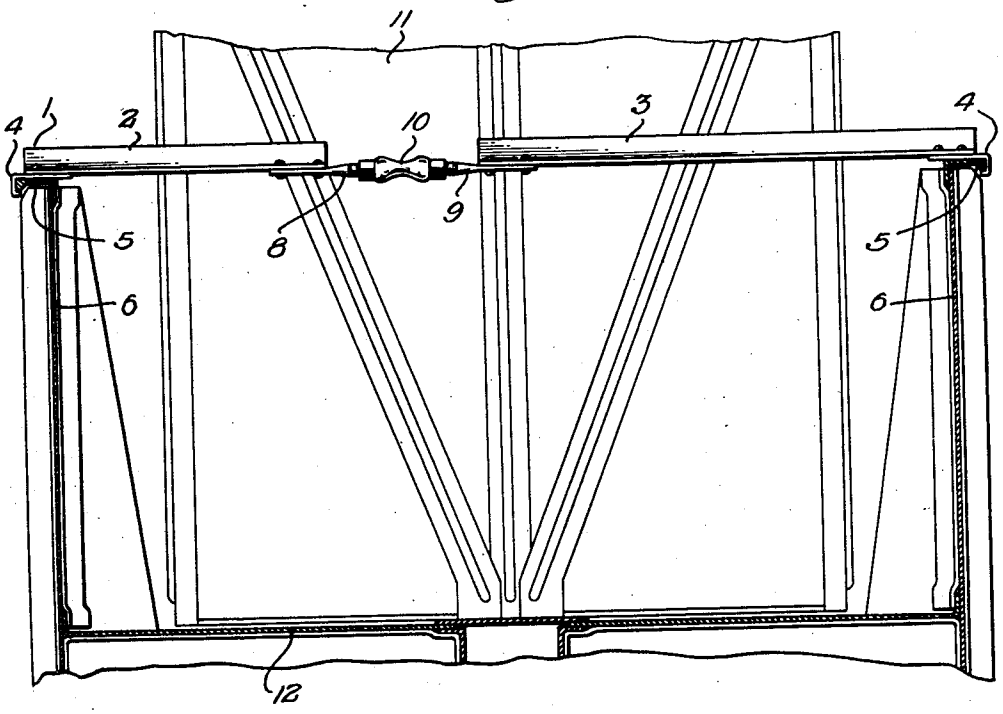
Attorney

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Fig. 2.



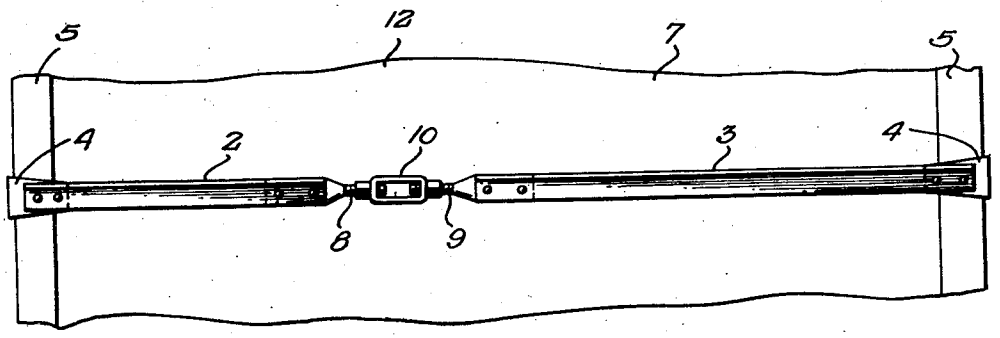


Fig. 3.

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UNITED STATES PATENT OFFICE

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HOLDING DEVICE FOR CONTAINERS

Application filed December 1, 1930. Serial No. 499,397.

This invention relates to a holding device for use in securing merchandise containers from shifting longitudinally on a railway car, as, for example, when the containers are placed in position for transportation on high side gondola cars of ordinary type, namely, cars which are not specially constructed to receive such containers and to lock the same from shifting movements. The holding device of this invention, however, may be used on special container cars for holding or assisting in holding from shifting containers when transporting less than a complete set of containers or when, due to the length of the car, considerable space is left at either end after a full complement of containers is loaded thereon.

Containers and container cars of the type in connection with which my invention is designed to be used are commonly in the form of metal boxes adapted to be shipped on gondola cars of special type, the containers and cars being provided with guides and guide shoes or holders which interengage when the containers are placed in position to hold the containers from shifting longitudinally or longitudinally and laterally on the car. It sometimes happens that a special type of car of the character referred to is not available at a time it is desired to make a shipment of containers, or that the number of containers to be shipped is not sufficient to form a full complement.

The main object of my invention is to provide a holding device for use under these conditions, whereby to permit the shipping of merchandise containers in gondola cars not equipped with the regular guides for engagement with the guide shoes on the containers, or for permitting less than a full load complement of containers to be shipped and held from movement on cars provided or not with such guides.

A further object of my invention is to provide holding devices which may be engaged with the upper edges of the side walls of gondola cars to form partitions dividing the car into container compartments and barriers for holding the containers from shifting in said compartments, and which holding devices are adjustable for clamping and releasing actions and to suit possible variations which may exist in the distance between the side walls of different cars or of the same car at different points in the length of the car.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Fig. 1 is a top plan view of a portion of an ordinary type of gondola car, showing the application of two of the holding devices as employed for forming container compartments and holding containers therein from shifting.

Figure 2 is a vertical transverse section of Figure 1.

Fig. 3 is a top plan view of the parts shown in Fig. 2.

In carrying my invention into practice, I provide holding devices, preferably of rigid type, adapted to be extended transversely of a gondola or like car for dividing the car into container holding spaces or compartments. These holding devices are designed for ready and convenient engagement with and disengagement from the side walls of the car, so as to be interchangeably used upon different cars, and are of adjustable type for locking and interlocking actions and for variations as to length in order to suit distance variations between the car walls, due to warping or other causes.

In the example shown, each of these holding devices comprises a bar 1 of sectional type and formed of a pair of longitudinally alined members or bar sections 2 and 3, which, for the sake of securing both strength and lightness, are preferably constructed of angle metal. To the outer ends of these bar sections 2 and 3 are riveted or otherwise suitably secured engaging members 4 in the form of hooks adapted to interlock with the outturned or flanged upper rim edges 5 of the side walls 6 of the car 7 to which the holding devices are designed to be applied.

At their inner ends the bar sections 2 and 3 are coupled by adjusting means consisting of right and left hand threaded rods 8 and 9

riveted or otherwise secured at their relatively outer ends to the inner ends of the bar sections 2 and 3 and connected at their inner ends by a turnbuckle 10, whereby the bar sections 2 and 3 may be adjusted inwardly or outwardly for locking and unlocking actions and to vary the length of the bar as occasion may require for engagement with the side walls of the car.

The merchandise containers 11 are intended to be loaded upon the car 7 so as to rest upon the car bottom 12 and to be arranged and held in proper spaced relationship to each other by the holding devices 1. The arrangement of the containers in the car may be such, where possible, that the end containers of a loaded series of containers bear against the end walls 13 of the car or are spaced from such walls by properly interposed holding devices, but the holding devices are operatively disposed so as to be arranged between adjacent containers to divide the interior car into container holding compartments or spaces and to hold the containers from shifting longitudinally of the car. As shown in the drawings, the containers are in practice of such size relative to the width of a standard gondola car that normally a container will fit between the usual side wall braces 14 at the opposite sides of the car, which braces will serve to hold the container from shifting laterally of the car.

In applying the holding devices 1 it is to be understood that the turnbuckle 10 of each holding device is slackened, if required, to permit the holding bar 1 to be extended across the car so as to rest upon the rim flanges of the opposite sides 6 at the proper point and to dispose the hooks 4 for interlocking engagement with the edges of the flanges. The turnbuckle 10 is then tightened so as to draw the bar sections 2 and 3 inwardly and thereby shorten the bar and bring the hooks 4 into interlocking engagement with the flanges 5, whereby the bar will be clamped to the flanges and thereby firmly held in position against any possibility of shifting, the bar when so applied acting as a partition to divide the car body into two adjacent container holding spaces or compartments, as a holding device for preventing shifting of the containers longitudinally in the car, and as a brace to connect and stay the side walls of the car against bulging under pressures and strains falling thereon. It will, of course, be understood that the turnbuckle connection between the bar sections 2 and 3 not only serves to adjust the hooks or clamps 4 for locking and releasing actions, but also to accommodate themselves to any variations which may exist in the distance between the side walls of different cars or of the same car at different points, due to warping or other distortion of the side walls, so that a ready and quick engagement of the holding devices with the side walls of both old and new cars in use may be easily and conveniently effected.

It will be seen from the foregoing description, taken in connection with the drawings, that the invention provides holding devices for the purposes described which adapt an ordinary high side gondola car to be converted into a container car for shipment of merchandise containers, thus making it possible to utilize an ordinary gondola car for the purpose when a standard container car is not available, as well as to permit less than a full complement of containers to be shipped on either a standard container car or an ordinary gondola car with greater safety and security against shifting. It will also be seen that the holding devices embodying my invention, while simple and cheap of construction, are readily and conveniently applicable to the sides of a standard gondola car to convert the same into a container car, whether the walls of such container car are in perfect shape or not, since the adjusting means of the holding device enables the device to be applied to a car whose side walls are bent, warped or otherwise distorted to a material extent.

While the construction of holding device herein shown for purposes of exemplification is preferred, it is to be understood, of course, that changes in the form, construction and arrangement of parts of the holding device may be made within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, I claim:—

1. Means for dividing an ordinary gondola car into merchandise container receiving spaces or compartments and holding the containers therein from shifting, comprising a longitudinally extensible and contractible device adapted to be extended transversely between the side walls of the car and detachably engaged with such walls.

2. Means for dividing an ordinary gondola car into merchandise container receiving spaces or compartments and holding the containers therein from shifting, comprising a device adapted to be extended transversely of the car between the side walls thereof, said device having means for clamping engagement with said walls.

3. Means for dividing an ordinary gondola car into merchandise container receiving spaces or compartments and holding the containers therein from shifting, comprising a device adapted to be extended transversely of the car between the side walls thereof, said device having clamping members to engage the upper edges of said walls, and means for actuating said clamping members.

4. Means for dividing an ordinary gondola car into merchandise container receiving

spaces or compartments and holding the containers therein from shifting, comprising a device adapted to be extended transversely of the car between the side walls thereof, said device having hooks at its ends adapted for engagement with the edges of the walls, and means for actuating said hooks.

5. Means for dividing an ordinary gondola car into merchandise container receiving spaces or compartments and holding the containers therein from shifting, comprising a device adapted to be extended transversely of the car between the side walls thereof, said device embodying relatively movable elements having members for engagement with the edges of said walls, and means for adjusting said elements to move said members into and out of engagement with the walls.

6. Means for dividing an ordinary gondola car into merchandise container receiving spaces or compartments and holding the containers therein from shifting, comprising a bar adapted to be extended transversely of the car between the side walls thereof, said bar embodying longitudinally alined sections, engaging members carried by said sections for engagement with the upper edges of the side walls of the car, and means adjustably connecting the bar sections.

7. Means for dividing an ordinary gondola car into merchandise container receiving spaces or compartments and holding the containers therein from shifting, comprising a bar adapted to be extended transversely of the car between the side walls thereof and embodying a pair of longitudinally alined sections, hooks at the outer ends of said sections for interlocking engagement with the upper edges of said side walls, and means adjustably connecting said bar sections at their inner ends.

8. Means for dividing an ordinary gondola car into merchandise container receiving spaces or compartments and holding the containers therein from shifting, comprising a bar adapted to be extended transversely of the car between the side walls thereof, said bar embodying a pair of longitudinally alined sections, engaging members at the outer ends of said sections for interlocking engagement with the side walls of the car, and a turnbuckle adjustably connecting said bar sections at their inner ends.

In testimony whereof I affix my signature.

GRAHAM C. WOODRUFF.