April 7, 1942. R. J. KUHL 2,278,885

SHIPPING CONTAINER ANCHOR MEANS

Filed April 13, 1940

Fig. 1.

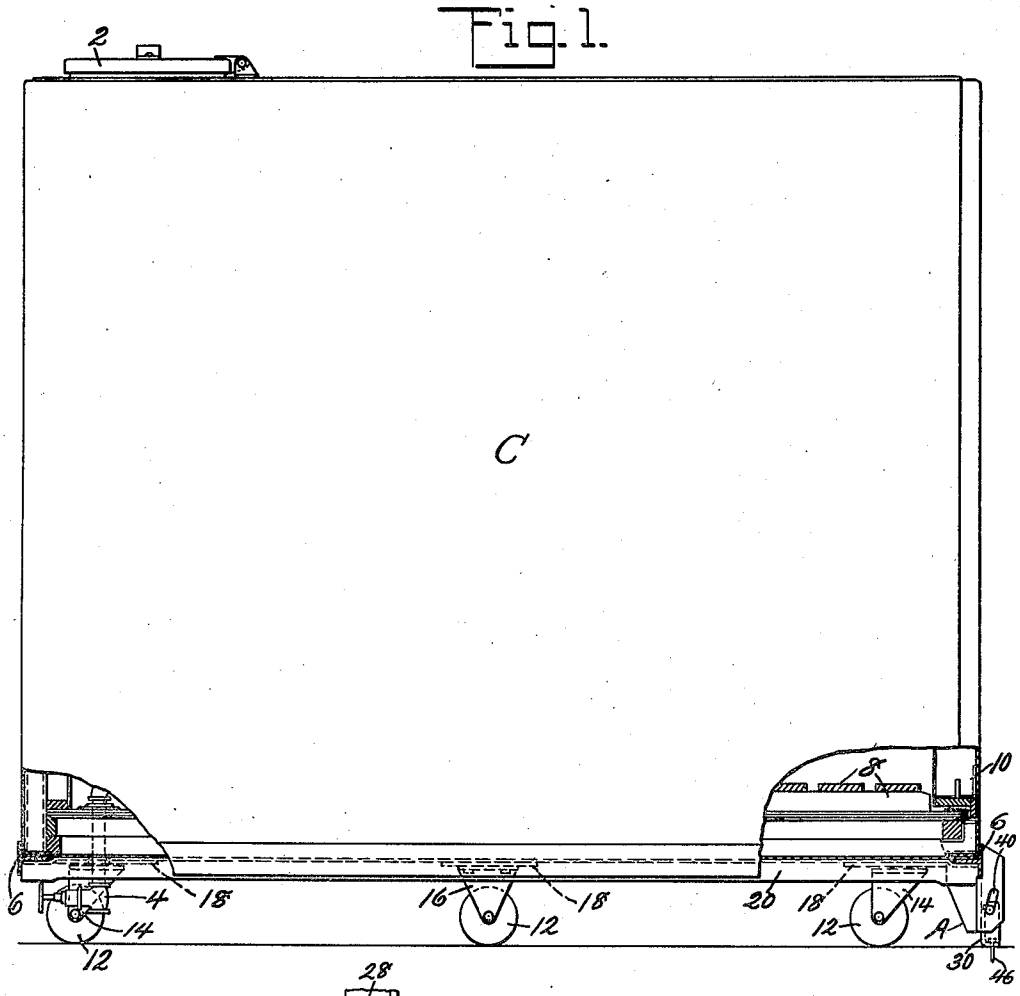


Fig. 5.

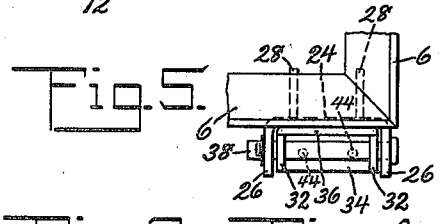


Fig. 2.

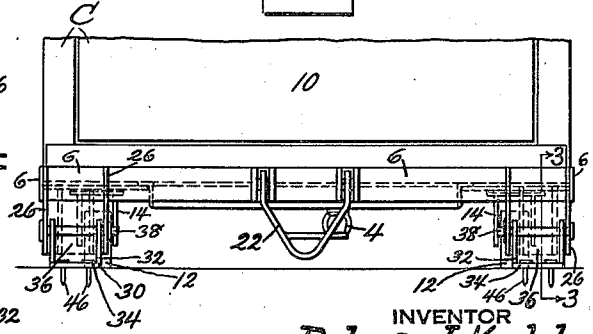


Fig. 3.

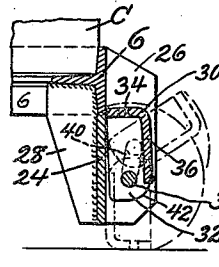
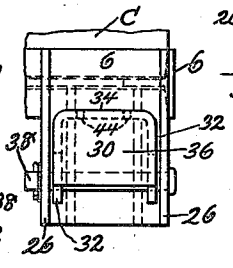


Fig. 4.



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SHIPPING CONTAINER ANCHOR MEANS

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Application April 13, 1940, Serial No. 329,468

3 Claims. (Cl. 248—361)

This invention relates to anchor means for containers in general and in particular to such anchor means for shipping containers of the less than carload lot type.

The bulk of the less than carload or L. C. L. containers, has been designed to be carried on or within specially designed railway or highway vehicles but occasions have arisen wherein L. C. L. containers could to advantage be shipped in ordinary gondola cars or in box cars, or even upon flat cars. When such occasions arise extreme difficulty has been encountered in attempting to provide anchor means preventing shifting of the container on the car structure and this is particularly true of the type of container mounted on wheels and adapted to be pushed onto or off of the freight car floor. It is an object, therefore, of the present invention to provide an anchor means for shipping containers, which anchor means will firmly retain the container upon the supporting structure car floor or platform.

A further object of the invention is the provision of an anchoring means for shipping containers, which means is carried by the container in such a position as to be available for instant use when desired.

A still further object of the invention is the provision of an anchor means for shipping containers carried by the containers and capable of being rapidly spiked or otherwise fastened to the supporting floor structure.

These and other objects of the invention will be apparent to persons skilled in the art from a study of the following description and accompanying drawing, in which:

Figure 1 is a side elevational view of one form of container with parts thereof broken away to better disclose the type of container;

Fig. 2 is an end view of the container shown in Fig. 1;

Fig. 3 is a sectional view taken substantially on line 3—3 of Fig. 2 and showing a portion of the anchor means in several positions;

Fig. 4 is an end view of the anchor means when in an inoperative position, and

Fig. 5 is a plan view of the anchor means and a portion of the container structure.

Referring now to the drawing in detail, it will be seen that the container C is illustrated as of the refrigerated type with ice or other refrigerant being charged through an opening protected by cover 2 and with drippage escaping from the container through a valve outlet 4. It is to be understood, of course, that this type of container is used merely for representation since other types of containers may be used such as shown in Patents 1,937,615 and 1,937,550. The container in the present instance, however, is formed by a continuous frame 6 of T cross-section to which the side wall sheets of the container are fastened. Since the container is of the refrigerated type, it is provided with floor racks 8 and a large door 10 giving ready access into the container interior. In order that the container may be loaded in the refrigerator room, it is preferably mounted on a plurality of rollers or wheels 12, the end ones of which are carried by swivel caster frames 14, while the central ones are carried by a rigid frame 16. These caster frames are fastened directly to reinforcing plates 18 fastened to the floor of the container and to longitudinally extending angles 20 attached wherever possible to the container frame. As clearly shown in Fig. 2, the container is also preferably provided with a hinged pulling tongue 22 adapted to receive a handle or other means by which the container may be pulled or pushed either manually or mechanically into position.

In order to prevent movement of the container upon the supporting structure, anchor means A are provided located adjacent the lower corners of the container and at least at one end thereof. In the present instance these anchor means comprise a channel shaped frame or base member having a web 24 with the upper portion cut away and welded to the downturned leg of the T form frame, while the outwardly directed flanges 26 overlap and are welded or otherwise secured to the outer face of the head of the T frame member. In order to brace the connection of this frame or base member to the container a plurality of plates 28 are provided welded to the inturned leg of the T frame and to the downturned leg thereof, as well as to the back of the web 24, all as clearly shown in Figs. 3, 4 and 5. The base member and its bracing means, which have been shown as welded to the container frame, may obviously be fastened to the frame by means of bolts or other securing means, permitting its ready assembly or attachment to existing containers. The channel shaped frame or base member is of such a length as to clear the supporting structure, thereby permitting ready operation of the container on the supporting structure, but in order that the container may be anchored to the supporting structure a folding extension member 30 is provided. This member is shown as of semi-pan shape, having

side walls **32**, end wall **34**, all connected together by a side wall **36**. The side walls **32** are pierced to receive a pin or other member **38** extending completely through the side walls and through slots **40** formed in the outwardly directed flanges of the base member. As clearly shown in Figs. 1 and 3, these slots are of considerable length and inclined slightly from the vertical in order that the upper ends will be placed a greater distance from the web of the base member than are the lower ends of the slots. It will also be seen that one corner of the flanges **32** of the folding extension member are left square, while the other corner is rounded as at **42** and concentric with the pin **38**. The flange **34** of the folding extension member is provided with openings or holes **44** through which spikes or other securing means **46** may be driven and into the supporting structure upon which the container rests. While the pin **38** has been shown as continuous, it is obvious that short pins may be used, thus permitting a more ready driving of the spikes or other securing means without the interference of the central portion of the pin **38**.

The operation of the anchor means is as follows and assuming the anchor means to be in the position as shown in Figure 1: A pry bar or other means may be inserted or driven between the flange **34** and the supporting floor structure, thus permitting a lifting of the folding extension member **30** with the consequent removal of the spiking means. Vertical movement of the folding extension member is permitted by the elongated slots **40** formed in the base member. As soon as the spikes have been removed an operator may grasp the folding extension member and lift it substantially vertically in the slots until such time as the pin **38** reaches the upper end of the slot, after which the extension member may be folded inwardly toward the container and dropped down in the slot until the pin **38** reaches the lower end thereof. The extension member will now be in the position shown in full lines in Fig. 3 and will be positively retained in this position due to its own weight and the fact that the squared corner on flange **32** will prevent any rotation of the extension member without a positive lifting of the member. It is, of course, obvious that in moving from the spiked position of Fig. 1 to the folded position of Fig. 3 an operator will not exert any conscious lifting effort but merely a folding effort, since the rounded edges of flanges **32** will of themselves force the extension member to lift in the slots as the member is folded.

While the invention has been described more or less in detail, it is obvious that various modifications and rearrangements of parts, other than those shown and described, may be made and all such modifications and rearrangements of parts are contemplated as will fall within the scope of the appended claims which define my invention.

What is claimed is:

1. Anchor means for freight or other containers comprising a base member secured to the container and having side flanges directed outwardly from the container, a folding extension member having side flanges substantially paralleling the base member flanges, substantially vertically elongated slots in the flanges of said base member and pivot means extending through the slots and through the flanges of the extension member and joining said members together for relative pivotal and sliding movements, said slots being formed in the base member and inclined upwardly and outwardly whereby said extension member will move laterally away from the base member for rotation of the extension during upward sliding movements and be urged against the base member by sliding vertically downward in the limiting pivotal positions.

2. A freight container adapted to rest upon a floor or platform and comprising, a freight receiving structure, means fastened to and supporting said structure upon the floor or platform, anchor means consisting of a base member secured to the container with the lower end thereof in spaced relation to the floor or platform, a folding extension member pivotally connected to the base member by means including substantially vertically elongated slots, said slots being inclined upwardly and outwardly from the container wall whereby said extension member will move laterally away from the container during upward sliding movement of the extension member thereby permitting rotation of the extension, and openings in said extension member to receive fasteners for securing the extension to the floor or platform.

3. A freight container adapted to rest upon a floor or platform and comprising, a freight receiving structure, means fastened to and supporting said structure upon the floor or platform, anchor means consisting of a base member secured to the container with the lower end thereof in spaced relation to the floor or platform, a folding extension member pivotally connected to the base member by means including substantially vertically elongated slots, and said slots being inclined upwardly and outwardly from the container wall whereby said extension member will move laterally toward the container as the extension is secured to the floor or platform and may be swung to an inoperative position following an upward sliding movement of the extension member.

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