July 5, 1938. G. M. REIFER 2,122,950

FREIGHT CAR LOADING APPARATUS

Filed March 25, 1937

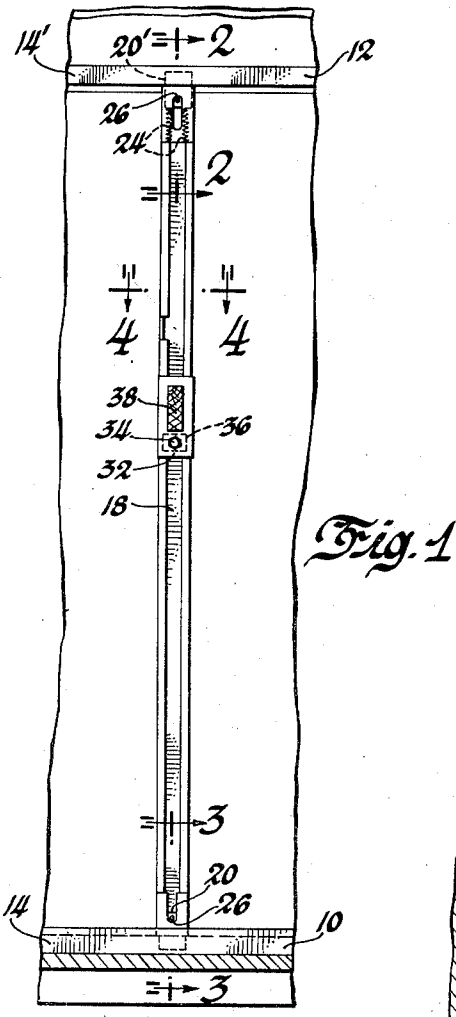

Fig. 1

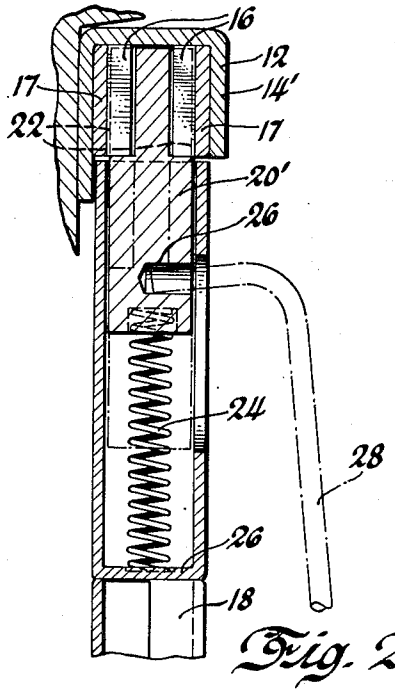

Fig. 2

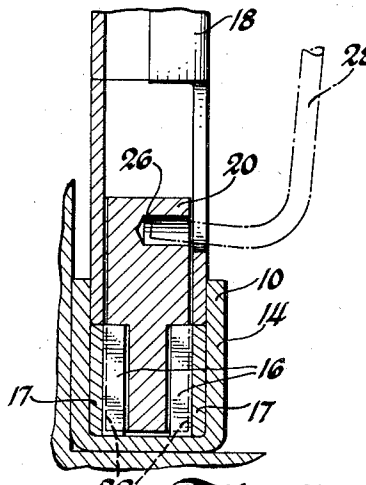

Fig. 3

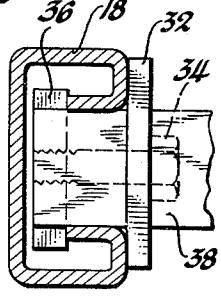

Fig. 4

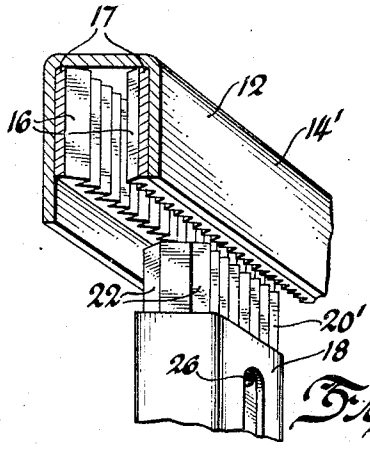

Fig. 5

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FREIGHT CAR LOADING APPARATUS

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9 Claims. (Cl. 105—369)

This invention relates to bracing means for securing freight in box cars and the like, and has to do particularly with an adjustable support for stanchions between which braces are adapted to be secured to hold the load in place in the car.

According to this invention the stanchions are provided with extensible and retractable ends having portions adapted to interlock with guides secured adjacent the top and bottom of the side walls of the car. By withdrawing the ends of the stanchion they may be readily removed and engaged in any desired position along the guides to enable the braces to be positioned to fit the load being carried. Details of the invention are described in the following specification and the accompanying drawing in which

Figure 1 is a side view of a box car showing the improved stanchion adjustably mounted therein.

Figure 2 is a section on line 2—2 of Figure 1.

Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a section on line 4—4 of Figure 1.

Figure 5 is a perspective view illustrating the toothed engagement of the stanchion and guide.

10 and 12 indicate guides secured adjacent the top and bottom of the side walls of the box car, and extending lengthwise thereof. Each of these guides consists of a channel member 14 or 14' having teeth 16 secured to the inner side walls. These teeth may be formed on separate bar-like members 17, welded or otherwise secured to the sides of the channel. The teeth 16 are provided along the full length of both guides.

18 indicates a stanchion in the form of a channel shaped member as shown in Figure 4. In the end of each channel there is slidably mounted an extension 20 or 20' adapted to be projected outwardly of the channel and having at opposite sides of its normally exposed end teeth 22 adapted to interfit with the teeth 16 of the channels. The upper member 20' is preferably held in extended position by coil spring 24 seating on flange 26 which may be formed out of the metal of the channel or be constituted by a plate welded in position. In the case of the lower extension 20 no spring is required for gravity serves to hold it in place, the channel member being supported by the edges of the bars 17 or equivalent abutments. The shanks of the extensions 20, 20' are preferably provided with sockets 26 adapted to be engaged by suitable tools 28 for convenience in retracting or extending the parts.

The stanchions 18 are preferably of channel section as shown in Figure 4, and are adapted to support plates 32 adjustably clamped along the length of the channel by means of bolts 34 passing through them and engaging plates 36 lying within the channel. Plates 32 support braces 38 which are adapted to engage the freight.

It will be clear that this arrangement provides a simple and positive mounting for the stanchions, and enables the braces to be positioned anywhere along the length of the car. The construction is simple and inexpensive.

The invention is susceptible of considerable modification. Thus if desired both of stanchion extensions may be provided with springs urging them outwardly. If desired the teeth may be provided on one side only of the channel and extension, although the illustrated arrangement is preferred owing to the heavy shocks to which such bracing is often subjected. Various other modifications will occur to those skilled in the art.

I claim:

1. In load bracing apparatus for freight cars the combination of channel-shaped guides secured adjacent the top and bottom of the side walls of a car and extending longitudinally thereof, said guides having their channels facing each other, stanchions, extensions slidably mounted in opposite ends of the stanchions and having portions adapted to project into the channels, said portions and the channels having parts adapted to interlock and prevent displacement of the stanchions, said interlocking parts having their engaging portions extending longitudinally of the stanchion so as to prevent displacement of the stanchion longitudinally of the car.

2. In load bracing apparatus for freight cars the combination of channel-shaped guides secured adjacent the top and bottom of the side walls of a car and extending longitudinally thereof, said guides having their channels facing each other, stanchions, extensions slidably mounted in opposite ends of the stanchions and having portions adapted to project into the channels, said portions and the channels having parts adapted to interlock and prevent displacement of the stanchions, said interlocking parts having their engaging portions extending longitudinally of the stanchion so as to prevent displacement of the stanchion longitudinally of the car, means for yieldingly urging one of said extensions out of the stanchions.

3. In load bracing apparatus for freight cars the combination of a channel-shaped guide provided with a series of teeth on opposite side walls of the channel, a stanchion, an extension slidably mounted in one end of the stanchion having teeth on opposite sides thereof adapted to interlock with the teeth on the channel wall, both

of said sets of teeth having their engaging portions extending longitudinally of the stanchion to prevent displacement of the stanchion longitudinally of the car.

4. In load bracing apparatus for freight cars the combination of channel-shaped guides secured adjacent the top and bottom of the side walls of a car and extending longitudinally thereof, said guides having their channels facing each other, said guides being provided with a series of teeth on corresponding inner side walls, a stanchion, and teeth on the sides of the ends of the stanchion adapted to interlock with the teeth on the guides, both of said sets of teeth having their engaging portions extending longitudinally of the stanchion to prevent displacement of the stanchion longitudinally of the car.

5. In load bracing apparatus for freight cars the combination of channel-shaped guides secured adjacent the top and bottom of the side walls of a car and extending longitudinally thereof, said guides having their channels facing each other, said guides being provided with a series of teeth on corresponding inner side walls, a stanchion, extensions slidably mounted in the ends of the stanchion, and teeth on the sides of the extensions adapted to interlock with the teeth on the guides, both of said sets of teeth having their engaging portions extending longitudinally of the stanchion to prevent displacement of the stanchion longitudinally of the car.

6. In load bracing apparatus for freight cars the combination of channel forming guides secured adjacent the top and bottom of the side walls of a car and extending longitudinally thereof, said guides having their channels facing each other, said guides being provided on their inner side walls with a series of teeth, a stanchion, and teeth on the sides of the ends of the stanchion interlocking with the teeth on the guide, both of said sets of teeth having their engaging portions extending longitudinally of the stanchion to prevent displacement of the stanchion longitudinally of the car.

7. In the combination as defined in claim 6, said stanchion having extensible and retractable ends and the teeth formed on said ends.

8. Stanchions for use in bracing loads in freight cars, having channel-shape in cross-section, and a slidably mounted extension fitted in said channel and adapted to be projected beyond the end thereof, said extension being provided with teeth on one side of said projecting portion, said teeth extending longitudinally of the stanchion.

9. Stanchions for use in bracing loads in freight cars, having channel-shape in cross-section, and a slidably mounted extension fitted in said channel and adapted to be projected beyond the end thereof, said extension being provided with teeth on opposite sides of said projecting portion, said teeth extending longitudinally of the stanchion.

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