Feb. 23, 1943. K. F. NYSTROM ET AL 2,312,119

RAILROAD FLAT CAR

Original Filed May 26, 1941

Fig. 1.

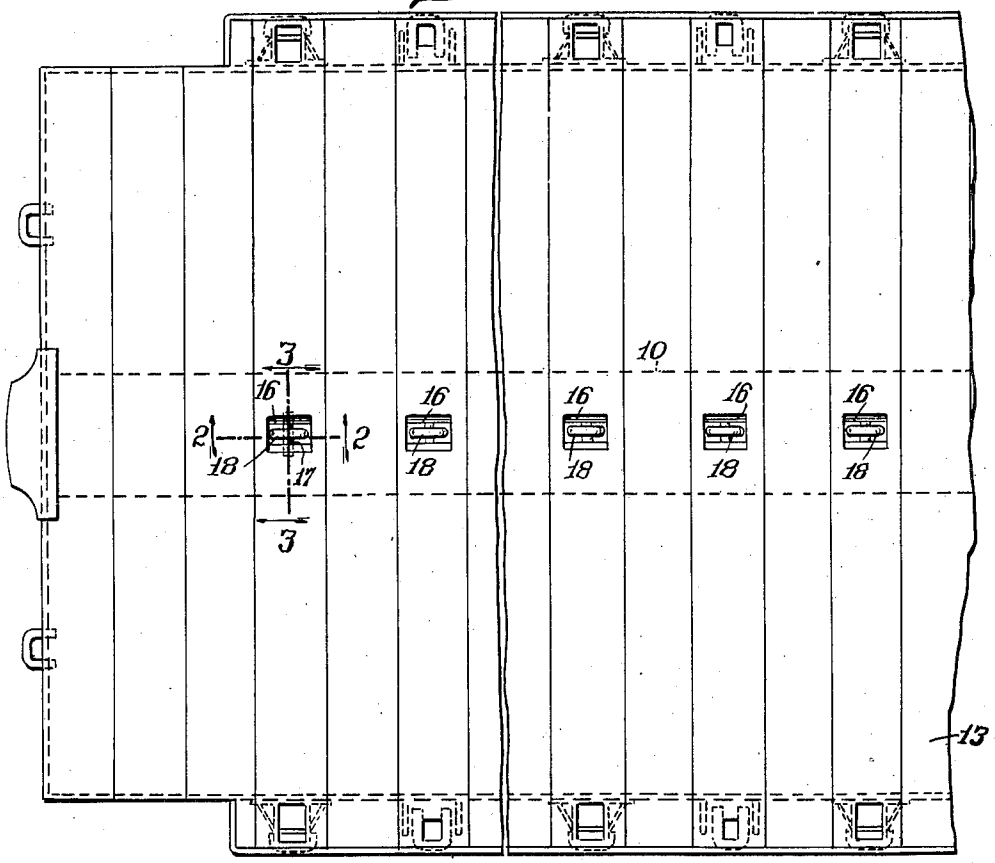


Fig. 3.

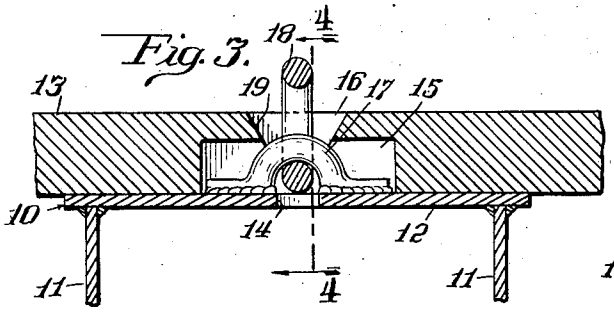


Fig. 2.

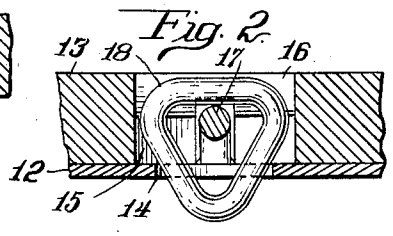
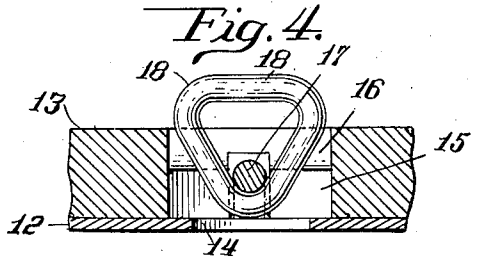


Fig. 4.



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RAILROAD FLATCAR

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Original application May 26, 1941, Serial No. 395,252. Divided and this application November 24, 1941, Serial No. 420,218

2 Claims. (Cl. 105—367)

Our invention relates to means whereby commodities, such as tractors, assembled implements, vehicles and the like, may be securely anchored on the flat cars without damaging the car-deck or floor; the invention more specifically stated involving a plurality of tie element receiving members spaced longitudinally of the car-deck, substantially at the longitudinal median line and secured to the car center sill so as to recede beneath the top surface of the car-deck or floor when not in use and thereby provide an uninterrupted deck surface; this application being a division of our copending application Serial Number 395,252, filed May 26, 1941, being for matter deleted from said application Serial Number 395,252.

The object and advantages of our invention will be readily comprehended from the detailed description of the accompanying drawing wherein:

Figure 1 is a plan view of one end of the deck of a flat car, with portions broken away, provided with our invention.

Figure 2 is a detail sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a cross sectional view taken on the line 3—3 of Figure 1, illustrating one of the tie element receiving members in raised position.

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 3 looking in the direction of the arrows.

Railroad flat cars as at present constructed provide no suitable means whereby the lading, such as tractors, vehicles and assembled implements, can be properly secured on the car against shifting during transportation. Such lading, in present practice, is secured against shifting by large wood blocks spiked to the floor or deck of the car and placed adjacent the wheels of the implements or vehicles and by tie-straps passing across the end of the floor-planks and secured in any suitable manner to the car underframe. When the lading is to be unloaded the spiked blocks must be pried loose causing the car deck or floor planks to be badly lacerated and necessitating subsequently applied blocks to be spiked at unworn places in the floor planks. As a result the floor planks or car deck are subject to rapid decay because of the moisture holding cavities or holes produced by the spikes.

Our invention consists in providing a flat car deck or floor with a plurality of hold-down or tie element receiving members arranged in suitable spaced relation lengthwise of the car coincident with the car center sill which preferably is of the built-up type as disclosed in Figure 3; the center sill being shown in dotted lines in Figure 1 at 10 and consisting of the longitudinal side members or beams 11, 11 provided with a top plate 12 (preferably welded to the side members 11 as shown), on which the floor planks 13 rest.

The top plate 12, at its longitudinal center line and at spaced apart points substantially throughout the length of the center sill, is provided with cut-outs or suitable slots 14; and the lower sides of the floor-planks 13, coincident with the slots 14, are provided with sockets or recesses 15 with which the openings 16, in the top surface of the floor-boards communicate; the sides of the openings 16 preferably being flared toward the top as shown in Figures 1 and 3.

The top plate 12 coincident with the recesses 15 in the floor is provided with brackets 17 arranged transversely of the slots 14 in the top plate and the ends of the brackets secured to the center sill top plate in some suitable manner as for example by welding, with the intermediate upstanding loop portions arranged immediately above the slots 14, see Figure 3.

Before the brackets 17 are secured to the center sill cover plate the brackets are each provided with a ring or loop 18, which is preferably of triangular shape and continuous single piece. The loops 18 are made of round stock as shown in cross-section, Figure 3, so as to present arcuate surfaces to the tie-wires or straps; and the apices of the triangular loops (when not in use) are adapted to extend through the slots 14 in the center sill cover plate and to drop down until the upper ends of the loops engage the tops of the brackets 17 as shown in Figure 2. The brackets 17 extend into a plane beneath the top surface of the car floor or deck 13 so that the upper ends of the loops 18, when not in use, will be disposed slightly beneath the upper surface of the car floor thereby providing an unobstructed floor, as shown in Figure 2.

In order to permit the loops 18 to angle sidewise and accommodate themselves to the direction of pull of the tie wires or bands, the openings in the floor-boards are preferably flared as shown at 19 in Figure 3. When the lading is to be secured to the median line of the car, the upper ends of the loops 18 are elevated above the car floor as shown in Figures 3 and 4 which allows the tie-wires or bands to be readily inserted through the loops; each loop being adapted to receive one or more tie-wires or bands when necessary.

With our improved construction, lading tie rods or means of uniform length may be employed with the result that a considerable saving in the cost of the tie means may be effected and at the same time a more secure fastening of the lading is made possible.

The specific form of the invention shown and described is believed to be its best embodiment, but modifications are possible and may be made without, however, departing from the spirit of our invention as defined in the appended claims.

What we claim is:

1. In a railroad car, the combination of a center sill with a cover plate provided with longitudinally spaced slots; a floor provided with recesses and slots coincident with the slots in the center sill cover plate; bracket members secured to the cover plate transversely of the slots and disposed in the floor recesses; and triangular shaped tie means receiving loops swiveled in the brackets so as to permit the lower ends of the loops to automatically drop into the cover plate slots and their upper ends to rest on said bracket members beneath the top of the floor when not in use.

2. In a flat car having a floor and a built-up center sill involving a cover or top plate provided at the longitudinal center line with a plurality of longitudinally spaced slots; upstanding bracket members secured to the top plate across slots; the car floor boards coincident with said bracket members having bracket member receiving recesses on the bottom and slots extending upwardly therefrom; and angular loop members swiveled in the bracket members so as to permit their upper ends to be moved upwardly through the floor slots, while the lower ends move through the slots in the center sill top plate when the loop members drop to normal position with their upper ends disposed beneath the top of the floor, the loop members being adapted to automatically move to normal position beneath the floor top.

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