June 10, 1952 E. P. SMITH 2,599,873

LADING STRAP FASTENING MEANS

Filed March 2, 1950

Fig. 1.

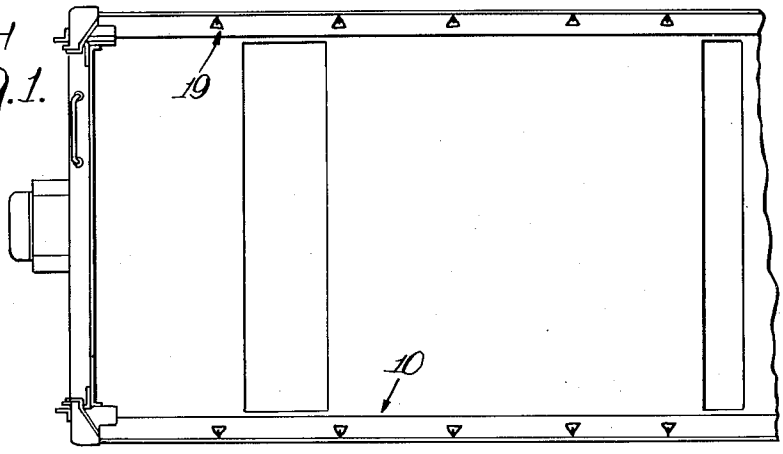
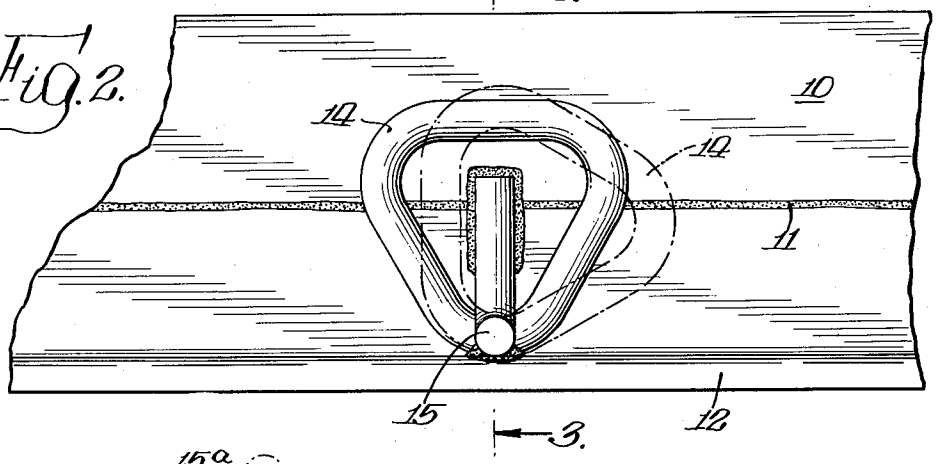


Fig. 2.



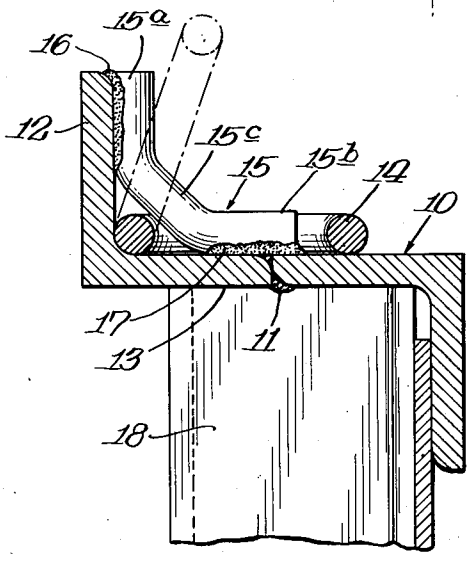


Fig. 3.

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LADING STRAP FASTENING MEANS

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3 Claims. (Cl. 105—369)

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My invention relates to means whereby the various types of lading anchoring straps may be readily and securely fastened to certain types of railroad cars, such as the gondola type; the invention providing simple means which can be readily applied to the metal portions or walls of the freight car.

The invention has for its object the provision of tie strap fastening means which will respond to the direction of pull by the straps without subjecting the tie straps to undue or tearing strains; the tie strap fastening means being so formed and mounted that a minimum number of units may be employed and the units so located as not to interfere with loading and unloading operations of the car.

The aforementioned objects and advantages of my invention will be readily comprehended from the following detailed description of the accompanying drawing wherein:

Figure 1 is a top plan view of one end of a gondola type railroad car, portions being broken away, illustrating certain of my improved fastening elements applied to the car top chord.

Figure 2 is a top plan view, on a larger scale, of a portion of the top chord of the type of car shown in Figure 1; adjustment of the means to the direction of pull of the tie strap being shown in dotted lines.

Figure 3 is a cross-sectional view taken substantially on the line 3—3 of Figure 2.

In the shipment of large or bulky pieces of lading in open top or gondola cars, it is customary to secure such lading against undesirable and violent shifting, through the use of tie rods or metal straps which are secured in some manner to the metal walls of the car, and for want of strap anchoring spots on this type of car, shippers have frequently resorted to burning holes in the side walls of metal gondola cars for passage of the tie rods or straps. This destructive method not only weakened the car walls, but unfitted the car for shipment of certain commodities and put the railroads to considerable expense and loss of car service.

My invention contemplates strap anchoring means which may angle to the direction of the strap pull and which will not hinder or interfere with the loading and unloading operations and will also leave the car walls imperforate.

In the exemplification, the bulb or top chord of the car wall is shown somewhat Z-shape in cross-section as shown at 10 in Figure 3; either in the form of a single Z-bar or a pair of L-shape or

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angle bars arranged in parallel relation and welded together as shown in Figure 3 at 11.

The Z-shape chord is arranged with one leg of the chord disposed downward on the inner face of the car wall and the other side or leg of the chord extends vertically upward, as shown at 12, while the intermediate portion of the chord extends horizontally across the car side wall as shown at 13. As clearly shown in Figure 3, the juncture between the sides or portions 12 and 13 of the top bulb or chord provides a groove or cavity to receive the link 14, which preferably is of triangular form with the narrow or small end of the link arranged in the cavity; the link 14 being held in place by the short band 15. Band 15, which, for the purpose of exemplification, is shown of circular, cross-section and bent to provide a vertical leg 15^a, a horizontal leg 15^b and an intermediate sloping side 15^c, arranged at an obtuse angle to sides 15^a and 15^b in order to provide the link receiving cavity therebeneath. Side 15^a is arranged parallel with and in contact with the leg or side 12 of the top chord and intimately connected thereto as by welding, indicated at 16; while leg or side 15^b extends parallel with the horizontal part 13 of the top chord and is intimately secured thereto as by welding shown at 17.

In order to permit proper angling of the link 14, it is preferable, at least, that the intermediate or cavity spanning portion 15^c be of circular cross-section or made arcuate on its lower or link engaging surface to enable free angling of the link.

A desirable number of these strap fastening links are intended to be provided at suitably spaced apart points as at 19 in Figure 1, preferably coincident with the car side posts, a portion of one being shown at 18.

Normally, the links 14 will lie in their inactive position as shown in full lines in Figures 2 and 3; but by reason of the construction shown, the links 14, after the commodity holding straps (not shown) have been passed through, will angle in the direction of the pull of the commodity holding straps, as indicated in dotted lines in Figure 2, and thus prevent undue twisting strains on the commodity tie straps.

As is apparent, the links will accommodate themselves to a certain amount of shifting of the lading during transit and still provide a direct pull or strain on the fastening rods or straps. The fastening means preferably are secured where the car wall, in conjunction with a single holding band 15, will provide a socket or cavity

for receiving the tapered or narrow end of the link, and where the link 14 may, when not in use, extend parallel and in juxtaposition with a flat wall or portion of the car where contact therewith is unlikely during loading and unloading operations.

I have described what I believe to be the simplest and best embodiment of my invention, but certain modifications are possible and may be made without, however, departing from the spirit of my invention as defined in the appended claims.

What I claim is:

1. Lading strap fastening means comprising the combination of angularly disposed portions of an open-top car side walls, whereby a socket is provided; a bent holding strap whose ends extend parallel with the respective angularly disposed car wall portions and are immovably secured thereto while the intermediate portion of said strap spans said socket and provides a closure for the socket; and a link loosely seated in said socket, in straddling relation with said holding strap, and arranged to extend flush with one of the car wall portions when not in operative position.

2. Lading strap fastening means for gondola-type railroad cars provided with an angular top chord consisting of a horizontal portion and a vertical portion; a triangular shaped link with substantially straight sides connected with each other by arcuate junctures with one of the junctures at the apex end of the link arranged in the socket formed by the juncture of the horizontal and vertical portions of said top chord so as to

permit the link to have swiveled action; and a link retaining strap disposed through said link across said juncture and formed to span said socket, with the ends intimately secured, respectively, to the horizontal and to the vertical portions of the top chord so as to permit the link to angle laterally.

3. Lading strap fastening means for gondola-type railroad cars provided with an angular top chord consisting of a horizontal portion and a vertical up-standing portion; a triangular shaped link with an arcuate apex end and said apex end of the link arranged in the socket formed by the juncture of two portions of said chord; and a link retaining strap disposed through said link and formed to span said socket, the intermediate portion of the strap which passes through the link being of arcuate cross-section to permit the link to automatically swing into parallel relation with the horizontal portion of the top chord, while the ends of the strap are intimately secured, respectively, to the horizontal and vertical portions of said top chord so as to permit the link to angle laterally.

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