

May 13, 1952

M. S. JOHNSON

2,596,855

LADING STRAP FASTENING MEANS

Filed Jan. 20, 1950

3 Sheets-Sheet 1

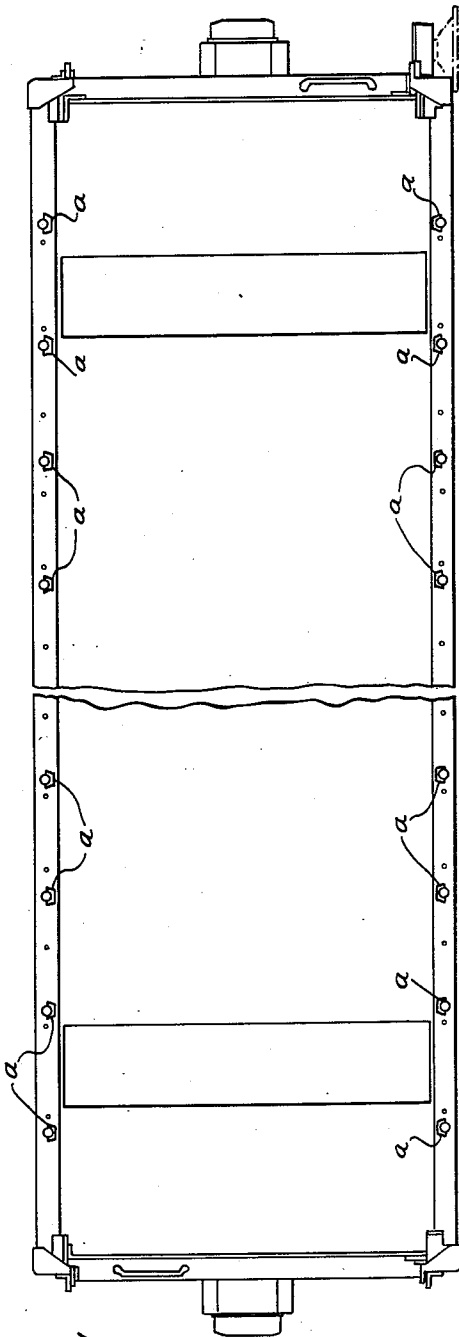


Fig. 1

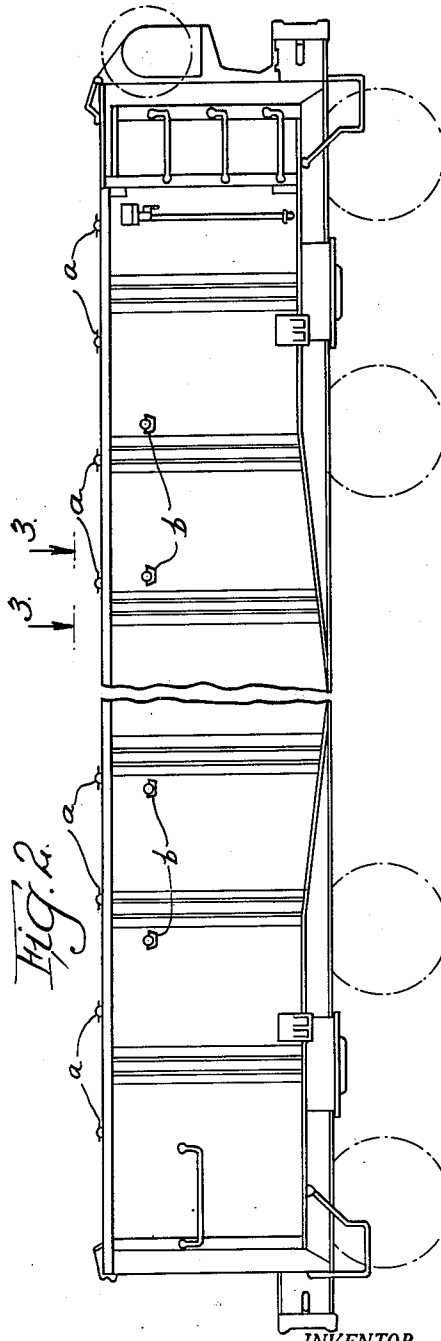


Fig. 2

INVENTOR.

Malcolm S. Johnson

BY

George Heidman
Att'y.

May 13, 1952

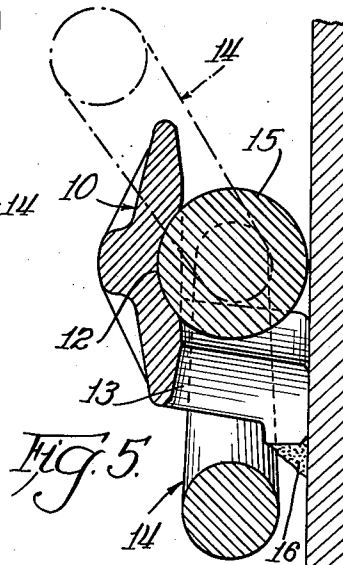
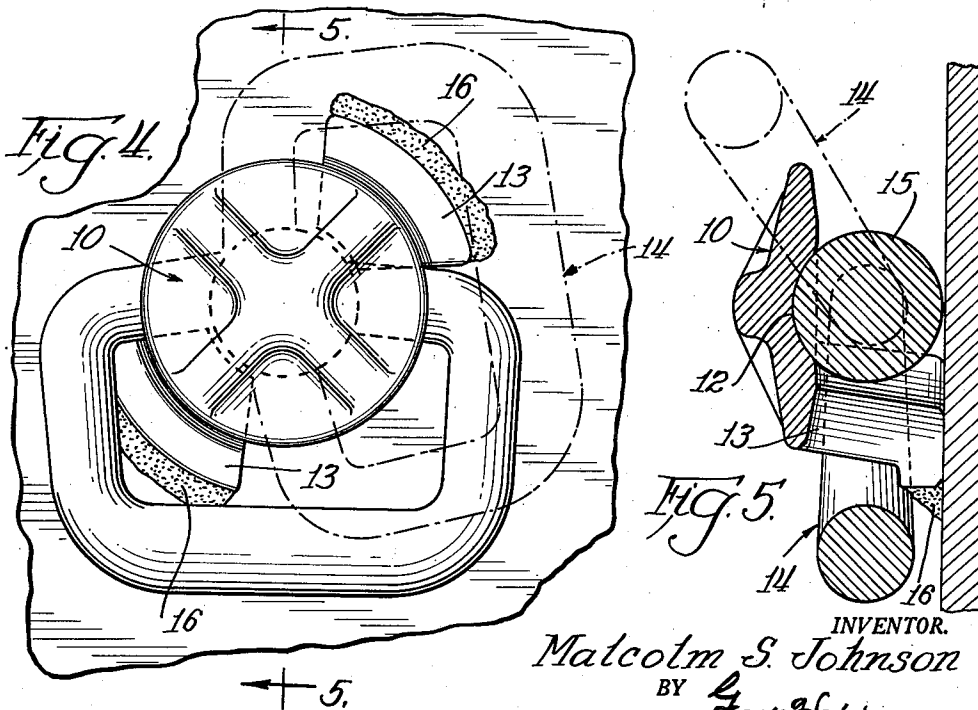
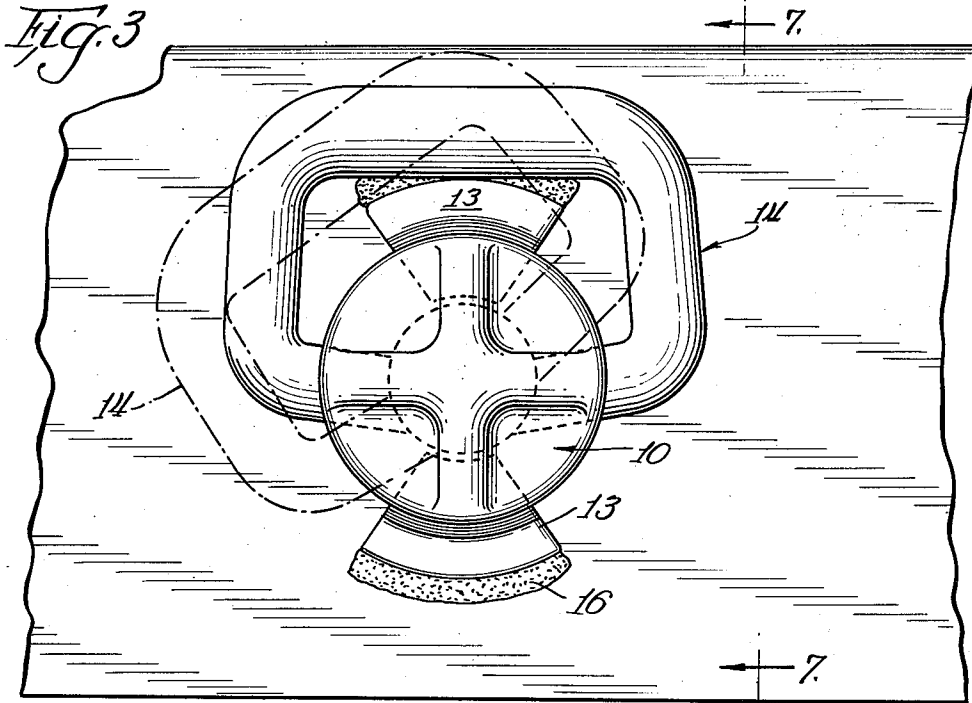
M. S. JOHNSON

2,596,855

LADING STRAP FASTENING MEANS

Filed Jan. 20, 1950

3 Sheets-Sheet 2



INVENTOR.
Malcolm S. Johnson
BY *Raymond S. Johnson*
Att'y.

May 13, 1952

M. S. JOHNSON

2,596,855

LADING STRAP FASTENING MEANS

Filed Jan. 20, 1950

3 Sheets-Sheet 3

Fig. 6.

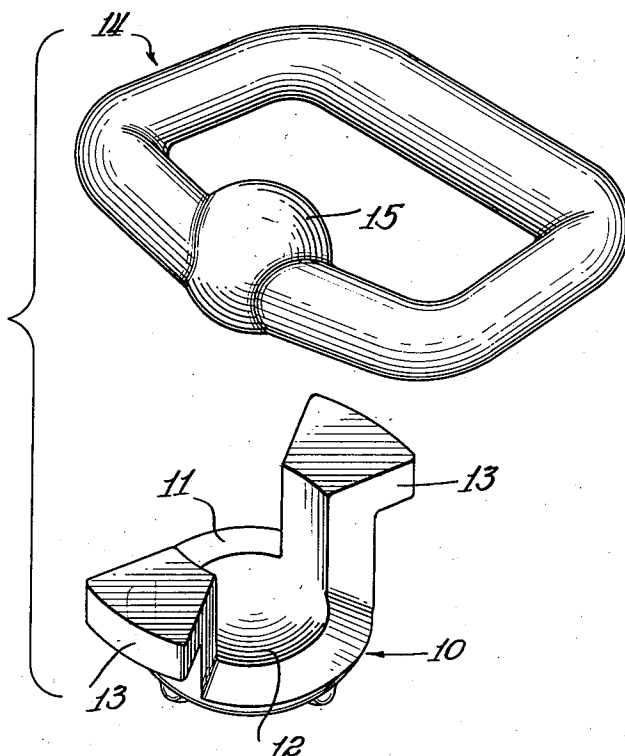
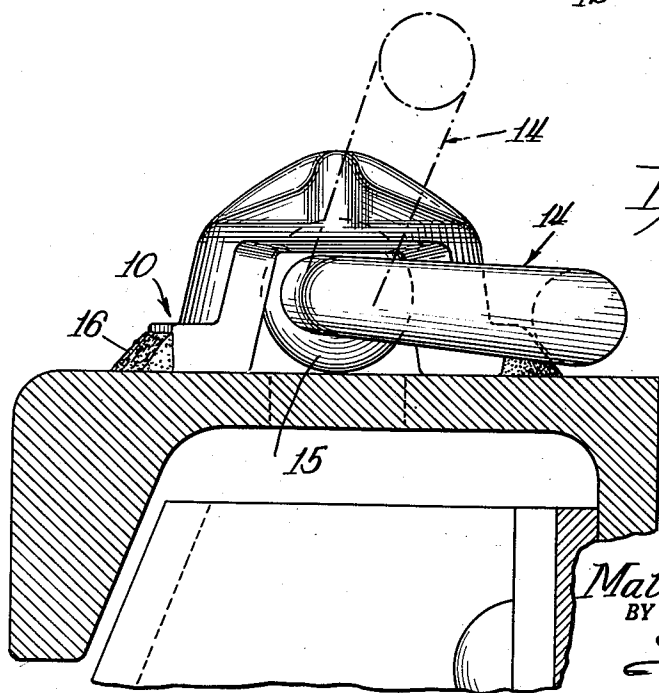


Fig. 7.



INVENTOR.
Malcolm S. Johnson
BY *George Fairman*
Att'y.

UNITED STATES PATENT OFFICE

2,596,855

LADING STRAP FASTENING MEANS

Malcolm S. Johnson, Chicago, Ill., assignor to
Illinois Railway Equipment Company, Chicago,
Ill., a corporation of Illinois

Application January 20, 1950, Serial No. 139,598

4 Claims. (Cl. 105—369)

1

My invention relates to means, adapted more especially to be secured to the gondola type of railroad cars, for securing various types of lading ties or anchoring straps.

The invention has for its object the provision of simple and efficient means which may be readily and intimately secured to the metal portions or walls of open top metal freight cars in a manner complying with the current Association of American Railroad Loading Rules; and which permits the tie means or straps to extend at an angle to the planes of the car sides and also to permit slight movement of the lading during transit without subjecting the tie means or straps to transverse or tearing strains.

My improved fastening means lends itself to symmetrical application to the car walls at the top and at the sides without regard to car post spacing, and therefore ample tie means may be provided for fastening loads full length of the car and at the ends and with a minimum of units.

A further object of the invention is the provision of an anchor or fastening unit designed to deflect blows; prevent damage during loading operations and arranged so that it will not protrude from the car body when in out-of-use position.

The above-mentioned objects and advantages, as well as other advantages inherent in the invention will all be readily comprehended from the following detailed description of the accompanying drawings wherein:

Figure 1 is a top plan view of a gondola type railroad car, with an intermediate portion broken away, illustrating one arrangement of my improved fastening means.

Figure 2 is a side elevation of the car shown in Figure 1 and disclosing another arrangement of the fastening means.

Figure 3 is a detail top plan view on a larger scale taken on the section indicating line 3—3 in Figure 2, as viewed by the arrows.

Figure 4 is a side elevation of the improved anchor unit shown applied to a section of the car side and arranged to accommodate the tie means or strap to extend at an angle to the perpendicular, as disclosed in dotted lines.

Figure 5 is a sectional view taken on the line 5—5 of Figure 4.

Figure 6 is an exploded perspective view of the two members that constitute my improved anchor or fastener unit, in inverted position.

Figure 7 is a sectional elevation as viewed on the line 7—7 of Figure 3.

The fastening means is intended for secur-

2

ing large or bulky pieces of lading on open top freight or gondola cars to prevent shifting during transit. In order to provide means or anchoring places on the car for the tie elements, shippers heretofore have frequently burned holes in the side walls of the metal gondola or open top car for passage of the tie rods or straps, a very objectionable method; first, because the sharp metal at the perimeter of the cut holes resulted in lacerating or tearing the metal straps; secondly, it weakened the car construction, unfitted the car for shipment of certain commodities, necessitating the welding of plates over the holes, thereby putting the railroads to considerable expense.

By reason of the various shapes and sizes of bulky lading a number of tie strap holding anchors or fastening means must be provided on the car, preferably a minimum number of units arranged in the manner specified in the A. A. R. Loading Rules. As an exemplification of the location of a plurality of the anchors, Figure 1 at *a* discloses the anchors or strap fastening units secured on top of the bulb or top chord of the car body frame; while Figure 2 at *b* discloses application of the units to the side wall of the car.

The various fastening units all are of similar construction, and each consists of a base or retainer member 10 whose body portion 11 preferably is substantially annular with a central socket 12; and the body portion 11 at diametrically opposite points is provided with peripheral lugs or posts 13, 13, of equal dimensions and of more or less sectoral shape with outwardly flaring sides and hence of increasing width toward the outer perimeters as clearly shown in Figure 6. The lugs or posts 13, 13, are shown with overhanging portions thereby providing increased attaching or welding surfaces for securing or welding the base member 10 to the car wall and/or to the top chord or bulb.

The exploded perspective Figure 6 also discloses the link member 14, preferably of rectangular form with one side or leg provided with an enlarged or ball-like portion 15, which is adapted to fit into the socket 12 of the base member 10 and thereby provide a ball-and-socket or swiveling relation between link 14 and the base member 10 when the latter has been welded or secured to the car.

With the flaring sides on the lugs or posts 13, 13 of the base or link retainer 10, it is apparent that the link 14 may angle in the direction or pull of the tie straps or elements and by reason of the swiveling relation between the link and the

3

retainer member the link will accommodate itself to a certain amount of shifting of the lading during transit, while still providing a direct pull or strain on the fastening means as shown in Figures 3 and 4.

In Figure 2 at b I disclose a number of the fastening means or anchors secured to the side walls of the car preferably at preselected spaced distances apart, with certain anchors arranged so that the link, when at rest, will hang substantially vertically as mainly shown at the intermediate portion of the car. While in the anchors, especially adjacent the ends of the car, the retainer 10, preferably is so secured to the car wall that the link 14, may swing into a greater angular position as indicated in dotted lines in Figure 4.

In Figure 1, I disclose the improved anchors secured on top of the angle top chord of the car, thus adapting the anchor more especially for tie straps to be used with lading, such as large pieces of machinery, which extend above the walls of the gondola and thus enable the straps or tie elements to exert a downward pull on the lading.

The base member or retainer 10, which may be shaped somewhat to conform to the contour of the car wall, preferably is intended to be intimately secured to a flat surface of the car wall and therefore is provided with the flat bottomed lugs 13 or angularly disposed portions which enable the retainers to be welded on the car wall as indicated at 16 in Figures 3, 4, 5 and 7.

A desideratum in lading strap fastening means is the provision of an anchor which, when not in use, will extend substantially flush or parallel with the car wall where contact therewith is unlikely during car loading and/or unloading operations, as, however, is the case with certain present day constructions which extend at right angles from the car side wall to which they are rigidly secured.

In order to somewhat deflect blows that may be encountered by the anchoring means, it may be provided on top with rigidifying portions or ribs and preferably crowned as more clearly shown in Figures 5 and 7.

I have shown and described what I believe to be the best embodiment of the invention, but structural modifications 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 for open top railroad freight cars comprising a base or retainer member adapted to be fixedly secured to the car wall and provided with diametrically spaced attaching portions having outwardly flaring sides, while the body portion on its lower face is formed to provide a central socket; and a

4

straight sided link whose one side is arranged between the attaching portions, and beneath the body portion of the retainer, said link side intermediate its ends having an enlarged spherical portion arranged to seat in said socket of the retainer and permit angling of the link.

2. Lading strap fastening means for railroad freight cars comprising an elongated straight sided link one leg or side whereof is provided with an enlarged arcuate portion; and a retainer member for securing said link to the car wall adapted to straddle the leg or side of said link having the arcuate portion and provided with angularly disposed portions at opposite sides of the link engaging intermediate portion and having flat car wall attaching surfaces, the link engaging portion of the retainer being formed to receive said enlarged arcuate portion of the link and permit the latter to angle toward the direction of the lading holding tie strap.

3. Lading strap fastening means for railroad freight cars comprising a straight sided link, one leg or side whereof is provided with an enlarged spherical portion; and a retainer member arranged to straddle said leg of the link, the lower face of the body portion of said retainer member having a socket to receive said spherical portion of the link to permit the latter to angle laterally, the retainer member at spaced apart points having angularly disposed portions for attaching the retainer to the car wall and arranged to loosely hold the link in place and permit the latter to angle in the direction of the pull of the lading tie means.

4. Lading strap fastening means for open-topped railroad cars, comprising a base or retainer member formed to match the formation of the car wall and be immovably secured thereto, said retainer member on its lower face having an annular concavity to provide a link-receiving socket, the member at opposite sides of the socket having downwardly extending lugs with laterally enlarged bases; and a tie element-receiving link provided with substantially straight sides, one of said sides having a spherical enlargement adapted to fit into the socket of the base member whereby a predetermined amount of angling of the link is permitted.

MALCOLM S. JOHNSON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,059,390	Pagel	Nov. 3, 1936
2,226,020	Rowe	Dec. 24, 1940