

Aug. 20, 1957

M. S. JOHNSON ET AL

2,803,201

LADING TIE ANCHORS

Filed June 3, 1953

2 Sheets-Sheet 1

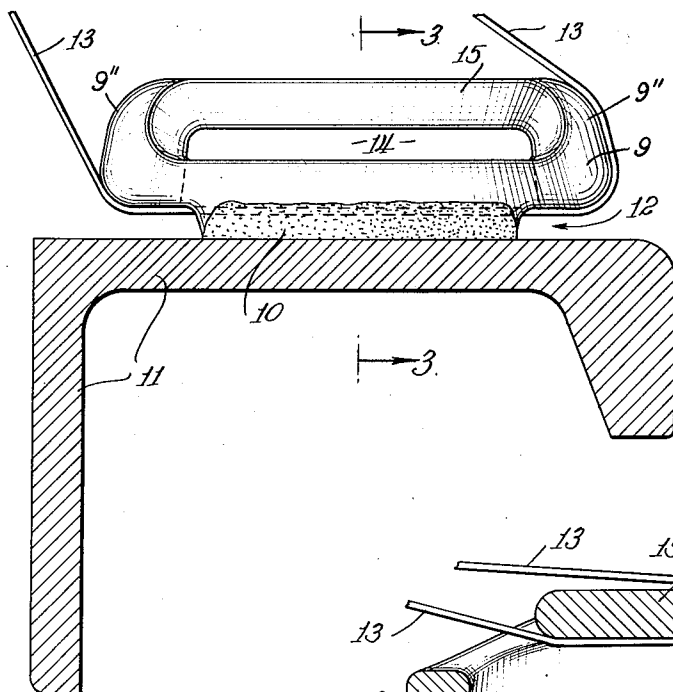


Fig. 1

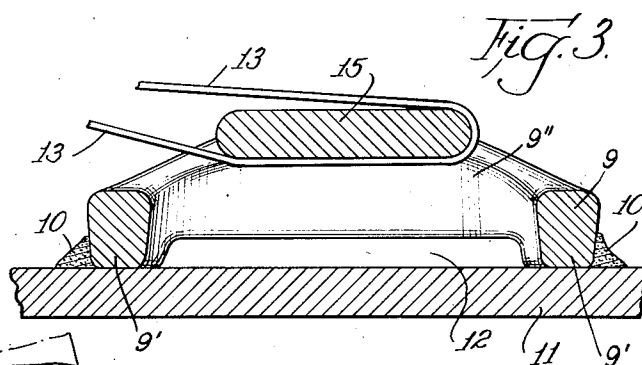


Fig. 3

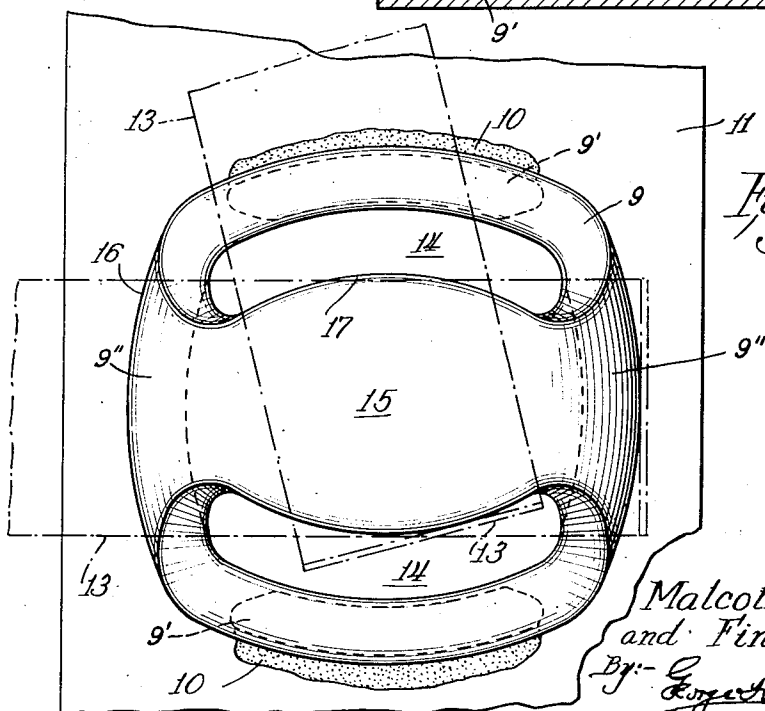


Fig. 2

INVENTORS:
Malcolm S. Johnson
and Finn Jensen
By: *Eugene Heideman* Atty.

Aug. 20, 1957

M. S. JOHNSON ET AL

2,803,201

LADING TIE ANCHORS

Filed June 3, 1953

2 Sheets-Sheet 2

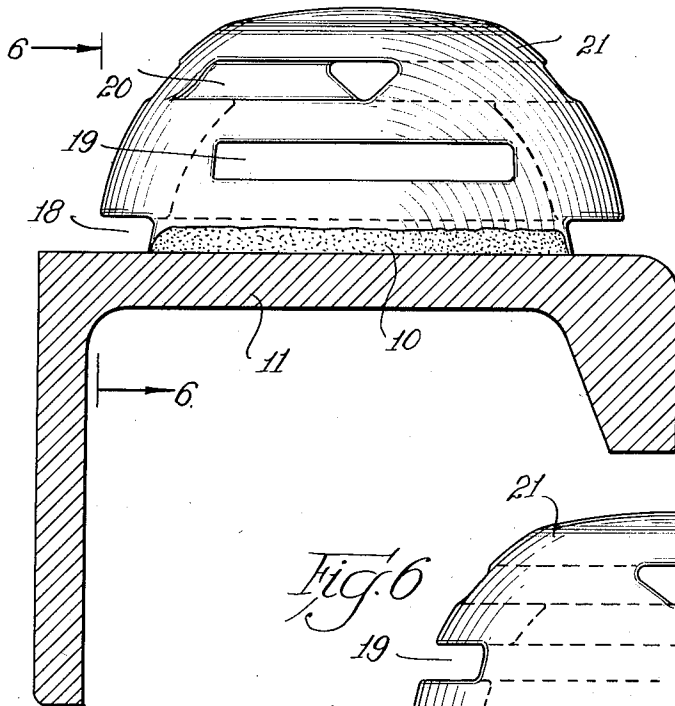


Fig. 4

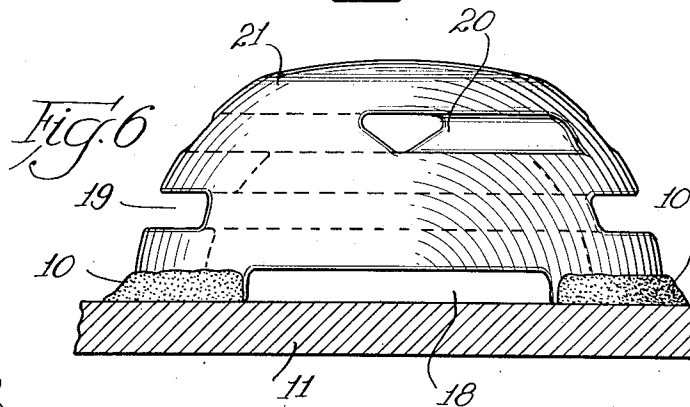


Fig. 6

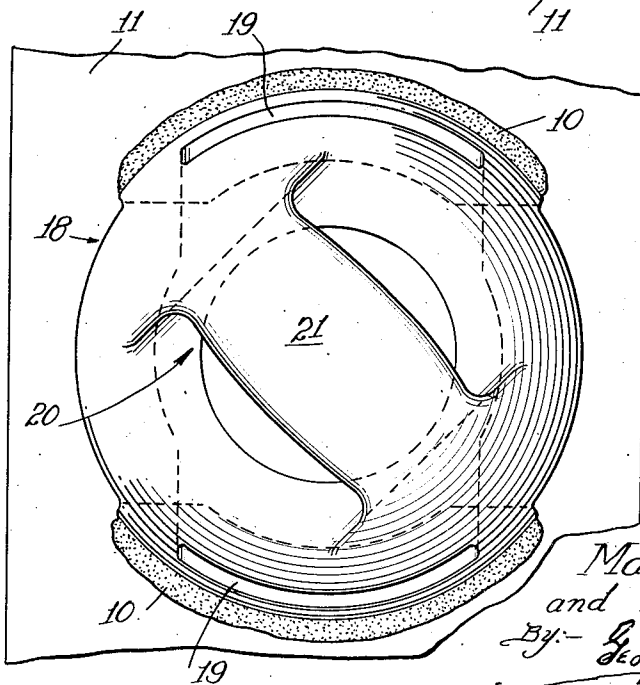


Fig. 5

INVENTORS:
Malcolm S. Johnson
and Finn Jensen
By: *George Heidman* Att'y.

1

2,803,201

LADING TIE ANCHORS

Malcolm S. Johnson, Flossmoor, and Finn Jensen, Chicago, Ill., assignors to Illinois Railway Equipment Company, Chicago, Ill., a corporation of Illinois

Application June 3, 1953, Serial No. 359,266

1 Claim. (Cl. 105—369)

Our invention relates to an anchor more especially intended for railroad gondola cars, complying with current loading rules and which eliminates the undesirable ruinous slot burning and car weakening method heretofore employed.

The object of our invention is the provision of—preferably—a single-piece anchor adapted for securement to the upper surface of the top chord angle of a gondola car and formed with rounded impact or blow-deflecting surfaces; an anchor which may accommodate a plurality of differently disposed tie straps or elements and thus permit a lesser number of anchor devices to be used.

The objects and advantages of our invention will all be readily comprehended from the detailed description of the accompanying drawings wherein:

Figure 1 illustrates the application of one form of our improved anchor in side elevation and applied to the top chord angle of a gondola car; the top chord being shown in cross-section and portions of a tie strap shown applied.

Figure 2 is a top plan view of an applied anchor and portions of a plurality of tie straps disposed in different directions.

Figure 3 is a vertical section taken substantially on the line 3—3 of Figure 1, as viewed by the arrows, with the anchor strap arranged at a different level.

Figure 4 is a side elevation of a modified form of our improved anchor which is shown applied to a car top chord which is in section.

Figure 5 is a top plan view of the structure shown in Figure 4.

Figure 6 is a side elevation of the anchor shown in Figure 4, as viewed on the indication line 6—6 of Figure 4.

Our improved anchors are exemplified as single-piece annular dome-like blocks or castings adapted to deflect impacts or blows and have the necessary strength to withstand the more or less rough usage encountered by gondola cars in use. The anchors are of transverse width preferably not exceeding the width of the top flange of the top chord of a gondola car; that is, confined within the transverse boundaries of the top flange.

As our anchors are intended, preferably, to be integrally secured to the gondola top chords, as by welding as shown at 10 in Figure 3, and in order to afford as large a welding surface as possible, we prefer to give the anchor a somewhat bee-hive or dome-like construction, which also permits the use of a plurality of differently disposed tie-receiving and holding zones or portions at different elevations.

The annular base portion 9 of the anchor having diametrically disposed depending portions 9', which rest on and are secured to the upwardly facing surface of a top chord angle 11, preferably by welding 10, is thereby provided with a transversely disposed groove or channel at 12, for reception of the well-known type of lading tie strap or metallic element 13, as shown in Figure 1.

Spaced from the bottom channel 12, see Figure 3,

2

and below the top of the anchor is another tie element receiving passage or channel 14 between diametrically opposed upstanding portions 9" which are interconnected by a strap holding body portion 15 at the top of the anchor.

As shown, the form of anchor disclosed in the first three figures presents a two-way anchor, with the bottom channel 12 arranged transversely of the gondola car top chord 11, while the upper channel 14 is disposed in a direction transversely of the direction of channel 12. This permits the anchor element or band of one passage to be looped over the commodity or load across the car and the anchor band of the other passage to pass around the ends of the load at approximately ninety degrees.

With the annular, dome-shaped body, the orifices of the passages are provided with more or less curved surfaces, see Figure 2 at 16—17, which permits the bands to angle, say twenty degrees at each side of the center without concentrating the load strains on the edges of the band.

In Figures 4 to 6, inclusive, we disclose a modification of our improved anchor, which differs mainly in the size or height of the block and hence in the number of tie receiving and holding zones.

The block or casting, similar to that previously described, also is shown of somewhat bee-hive or dome shape so as to remain within the confines of the transverse dimensions of the upper horizontal flange of the top chord angle of a gondola car and to withstand blows or impacts during car loading and manipulation of heavy lading and also to eliminate overhanging portions.

In this form of the anchor, which—as previously stated—is of annular and dome-like construction, we provide a multi-tie holding anchor which, similar to the structure of the previously described exemplification, is provided at bottom with a tie-receiving passage or channel 18, see Figure 6, which may be said to extend transversely of the top chord 11. The passage 18, as in Figures 1 to 3, is formed to leave relatively large base surfaces at opposite sides of the passage which permit large welding areas 10, whereby the anchor is intimately secured to the top chord angle 11 of the gondola car.

Midway between the bottom passage or channel 18 and the top of the anchor is a second passage 19, also extending entirely through the anchor substantially at right angles to the direction of bottom passage 18, see Figures 4 and 6; and between this passage 19 and the crown or top of the anchor is a third tie strap or element-receiving channel or passage 20 whose upper wall consists of the strap-like portion or crown 21; the passage 20 being disposed at an angle of approximately forty-five degrees to the direction of passage or channel 19, or at any other suitable degree.

This permits a number of tie straps or elements to be employed which may extend in different directions in keeping with the nature of the commodity to be anchored.

The orifices of the passages preferably are somewhat rounded or curved to prevent buckling or tearing of the tie straps; and the top or bar-like portion 21 is formed with an intermediate bulge, see Figures 2 and 5, which permits the tie element or band to angle a predetermined degree to each side of the central bulge without concentrating the load strains on the edge of the tie band.

Our improved multi-channeled anchor permits a multiple of tie elements or straps to be employed and hence a lesser number of anchors are necessary for application to a gondola car, with a plurality of differently disposed tie straps and whereby all pulling strains are transmitted to the rigid top chord of the car. The anchors preferably are of a more or less squatty nature so as not to offer too great an obstruction and at the same time maintain

3

the pulling strains close to the integral connections with the top chord.

The anchors are disposed a predetermined distance apart, and while we believe the drawings present the best exemplifications of our invention, certain 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:

A lading tie anchor adapted to be secured to an upwardly facing metallic surface of a railroad car comprising an annular base portion having diametrically disposed depending portions to be welded to said surface and spacing the remaining under surface of said base portion away therefrom whereby a lading tie can be disposed around said base portion between said depending portions, said annular base portion having diametrically opposed upstanding portions midway said depending portions in-

4

terconnected by a transversely extending body portion, the sides of said body portion being spaced from said annular base portion to provide openings on opposite sides through which a second lading tie can be disposed therearound in angular relation to the first mentioned lading tie.

References Cited in the file of this patent

UNITED STATES PATENTS

2,449,300	Jones -----	Sept. 14, 1948
2,587,882	Oakley -----	Mar. 4, 1952
2,596,855	Johnson -----	May 13, 1952
2,605,720	Smith -----	Aug. 5, 1952
2,638,063	Clark -----	May 12, 1953

OTHER REFERENCES

"Modern Railroads," September 1953, page 49.