June 7, 1960 A. E. WILKOFF 2,939,406

LADING ANCHOR PINS FOR VEHICLES

Filed May 12, 1958

Fig. 2

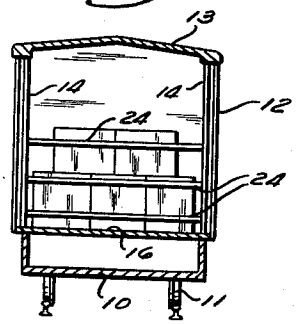
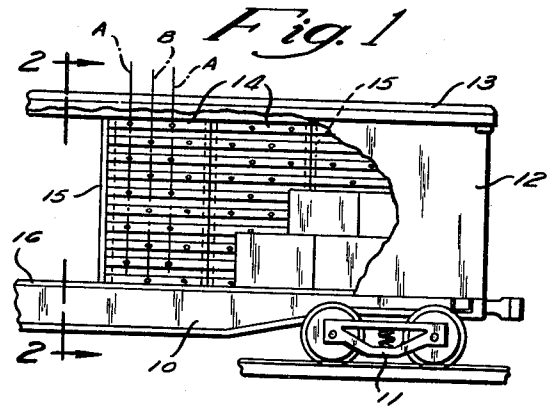


Fig. 1



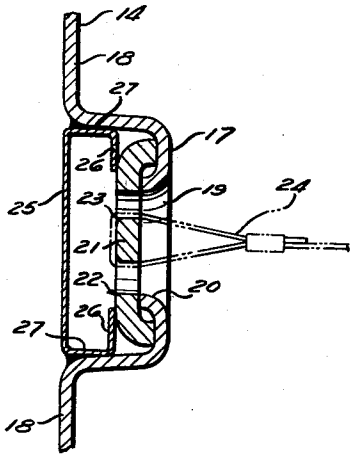


Fig. 5

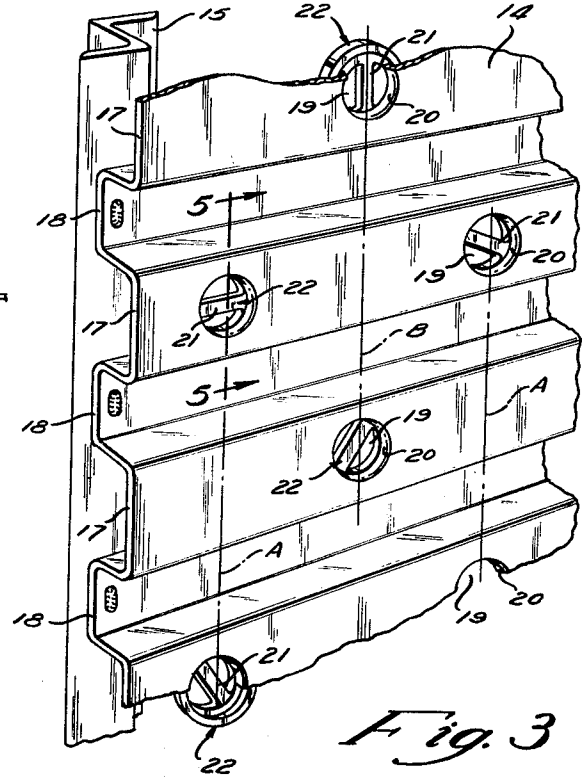


Fig. 3

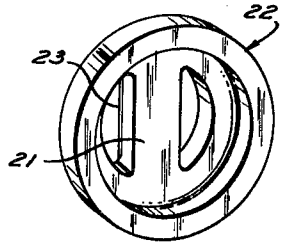


Fig. 4

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LADING ANCHOR PINS FOR VEHICLES

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1 Claim. (Cl. 105—369)

This invention relates broadly to freight carriers, and more specifically to anchor pins for the retention of tie straps employed to hold the lading in place in the carrier.

One of the objects of the invention is to provide corrugated sheet metal panels for lining the inner walls of a freight car, the corrugations in the panels being of rectangular cross section and having rotatable pins therein for the retention of tie straps that hold the lading in place.

A further object of the invention is to provide cups having the anchor pins therein to facilitate the ready rotation thereof in order to accommodate attachment of the tie straps without twisting or kinking the material thereof.

Another object of the invention is to provide circular openings in the webs of the channeled panels, each of the openings having flanged ribs on the inner face of the web for the retention of the cups, and to further provide metal strips in the opposed groove of the corrugated panels which are loosely engaged with the rearward face of the cups.

Further objects of the invention reside in the provision of an achor pin tie strap assembly which is efficient of operation, economic of manufacture, and adapted for rotative adjustment with ease and dispatch.

Other objects and advantages more or less ancillary to the foregoing, and the manner in which all the various objects are realized, will appear in the following description, which considered in connection with the accompanying drawings, sets forth the preferred embodiment of the invention.

Referring to the drawings:

Fig. 1 is a longitudinal sectional view of a freight car illustrating the improved panel and anchor pins mounted on a side wall thereof;

Fig. 2 is a transverse sectional view of the car shown in Fig. 1, the section being taken on a plane indicated by the line 2—2 in Fig. 1;

Fig. 3 is a view in perspective of a fragmentary portion of one of the anchor pin panels having the cups and anchor pins mounted therein;

Fig. 4 is a view in perspective of one of the cups and anchor pins; and

Fig. 5 is a vertical sectional view through one of the cups, the section being taken on a plane indicated by the line 5—5 in Fig. 3.

Referring first to Figs. 1 and 2, the railway box car, chosen herein as exemplary of one of the environs within which the improved anchor assembly may be used, comprises a frame 10 having an undercarriage and wheels 11 thereon, a body 12 and a top or roof 13. The corrugated panels 14 are welded or otherwise affixed to vertical frame members 15 for the walls of the car, and may be arranged, as shown, with the ribs 17 therein in horizontal parallel rows, or if desired, on the floor 16 of the car. Metal straps, such as bands commercially known as "Signoid" straps, are laced under and/or around the anchor pins and around the lading, then locked in place to restrain the box crate or other packaged material from shifting when the car is in transit.

The panels 14 are formed of corrugated metal having

rectangular channeled ribs 17 and grooves 18 therein, the ribs being disposed with their outer faces in confronting relation with the interior of the car. Each of the channel ribs is fabricated with a plurality of circular openings 19 therein and inturned beads or flanges 20 circumambient the openings on the inner faces of the webs of the channels. The anchor pins 21 are formed in the base of the cups 22 and are arranged, upon assembly, with the rims of the cups in telescopic engagement with the flanges 20. The cups may be made from steel castings or die struck from a sheet metal plate in which case the inner corners of the diametric pins 21 may be formed with rounded edges 23 to prevent abrasion of the tie straps 24.

The cups 22 are retained within the channeled ribs 17 by thin sheet metal channels 25 having inwardly directed flanges 26 on the edges of the legs 27 thereof. The flanges 26 engage the rearward face of the cups and restrain displacement thereof yet permit the cups to be rotated on their pilot seats formed by the flanges 20. The channels 25 are mounted in the ribs 17 and tack welded therein, thus it will be seen that the cups are resiliently held in place and may be rotatively adjusted with the pins 21 at any desired angle.

The cups 22 are horizontally spaced in each rib 17 and the panels 14 may be positioned so the vertical rows, indicated by the dot-dash lines A and B, are in staggered relation with each other, and thus minimize the number of cups in each channeled rib 17 without sacrifice to the strapping prerequisites of the lading.

The panels 14 and retaining channels 25 seal the interior of the car and accommodate the use thereof in carrying finely divided material, such as grain, when it is desired to use the car for material of such character instead of packaged lading or crated goods.

Although the foregoing description is necessarily of a detailed character, in order that the invention may be completely set forth, it is to be understood that the specific terminology is not intended to be restrictive or confining, and that various rearrangements of parts and modifications of detail may be resorted to without departing from the scope or spirit of the invention as herein claimed.

What is claimed is:

A lading strap anchor for railway cars comprising a channel shaped sheet metal plate having vertically spaced rectangular ribs and grooves therein disposed longitudinally in the car, the vertical portion of each rib having an inner face and an outer face with the outer face being disposed towards the exterior of the car, said vertical portion of each rib having longitudinally spaced openings therein, circular flanges circumambient said openings and protruding toward the exterior of the car, cups having the side wall thereof surrounding said flanges with the top edge of the side wall abutting the outer face of said rib, said cups being guided by and freely rotatable about said circular flanges, the bottom wall of each of said cups having spaced openings therein, an integral cross bar in the bottom of each cup between said openings and constituting a strap anchor pin, channel shaped plates positioned in said ribs in spaced relation to said outer faces, said channel plates having depending legs thereon disposed in abutting engagement with the bottom wall of said cups for retaining said top edge of the cups in engagement with the outer face of said ribs.

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