

Sept. 16, 1952

F. H. PIETZSCH
FREIGHT VEHICLE SIDE WALL WITH ANCHORING
MEANS FOR LADING STRAPPING

2,610,587

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3 Sheets-Sheet 1

FIG. 2.

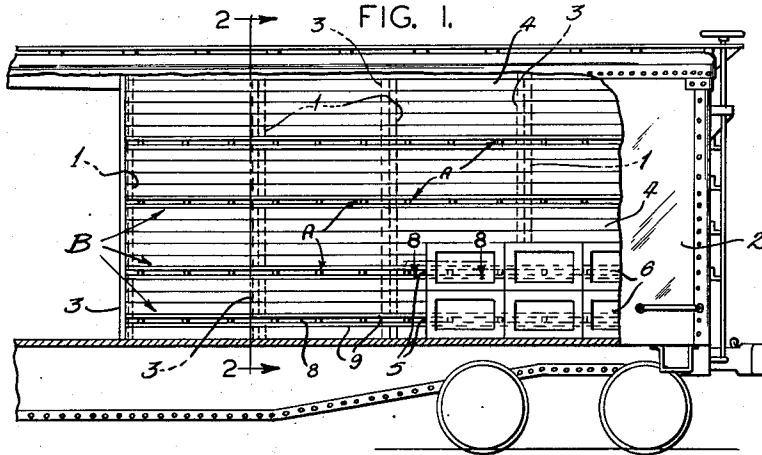
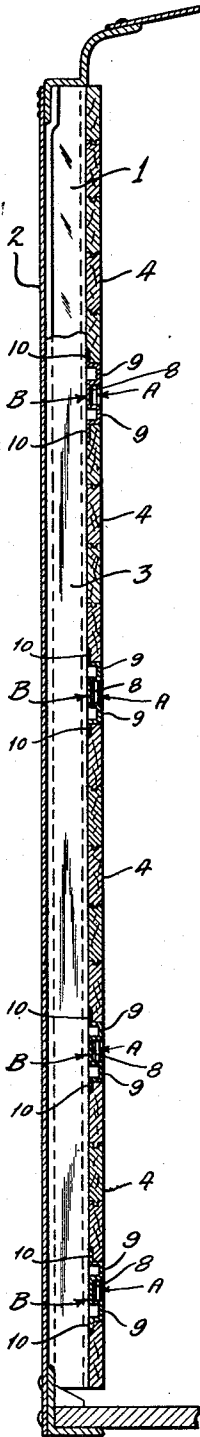


FIG. 5.

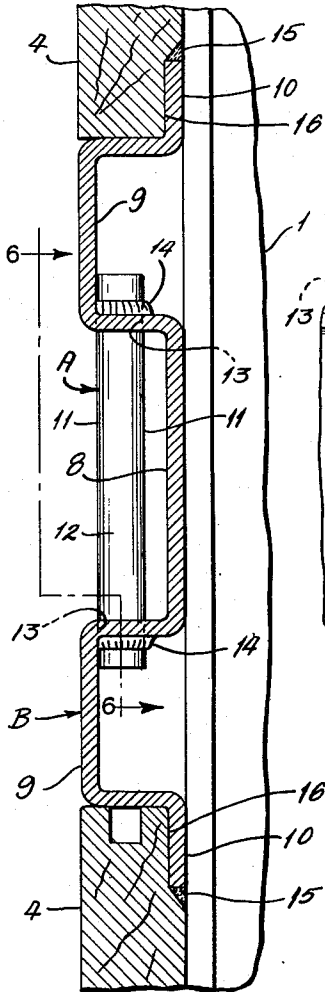


FIG. 6.

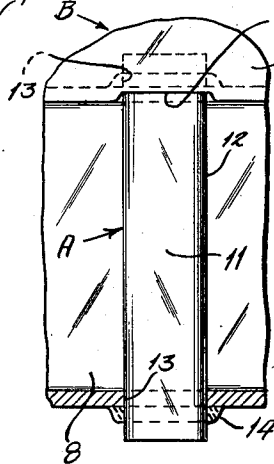
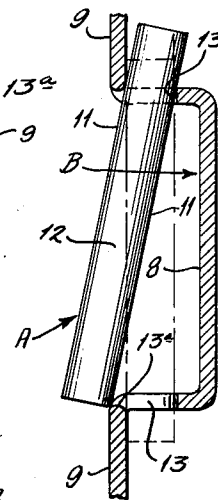


FIG. 7



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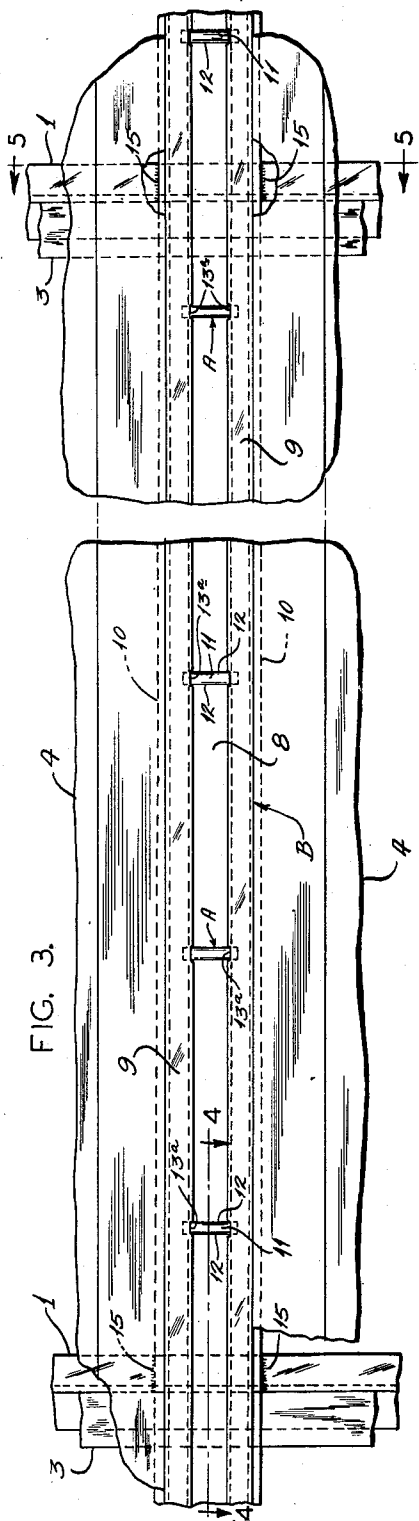
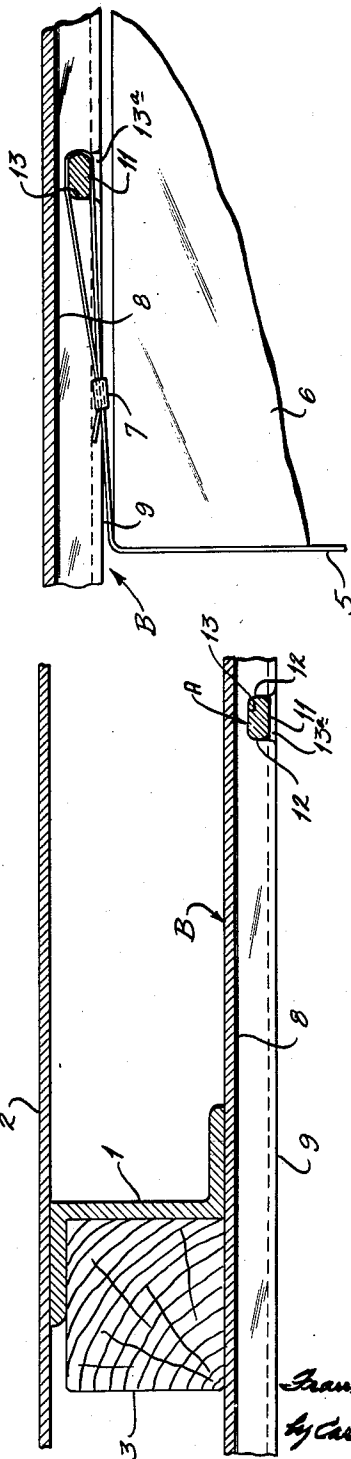


FIG. 3.

FIG. 4.



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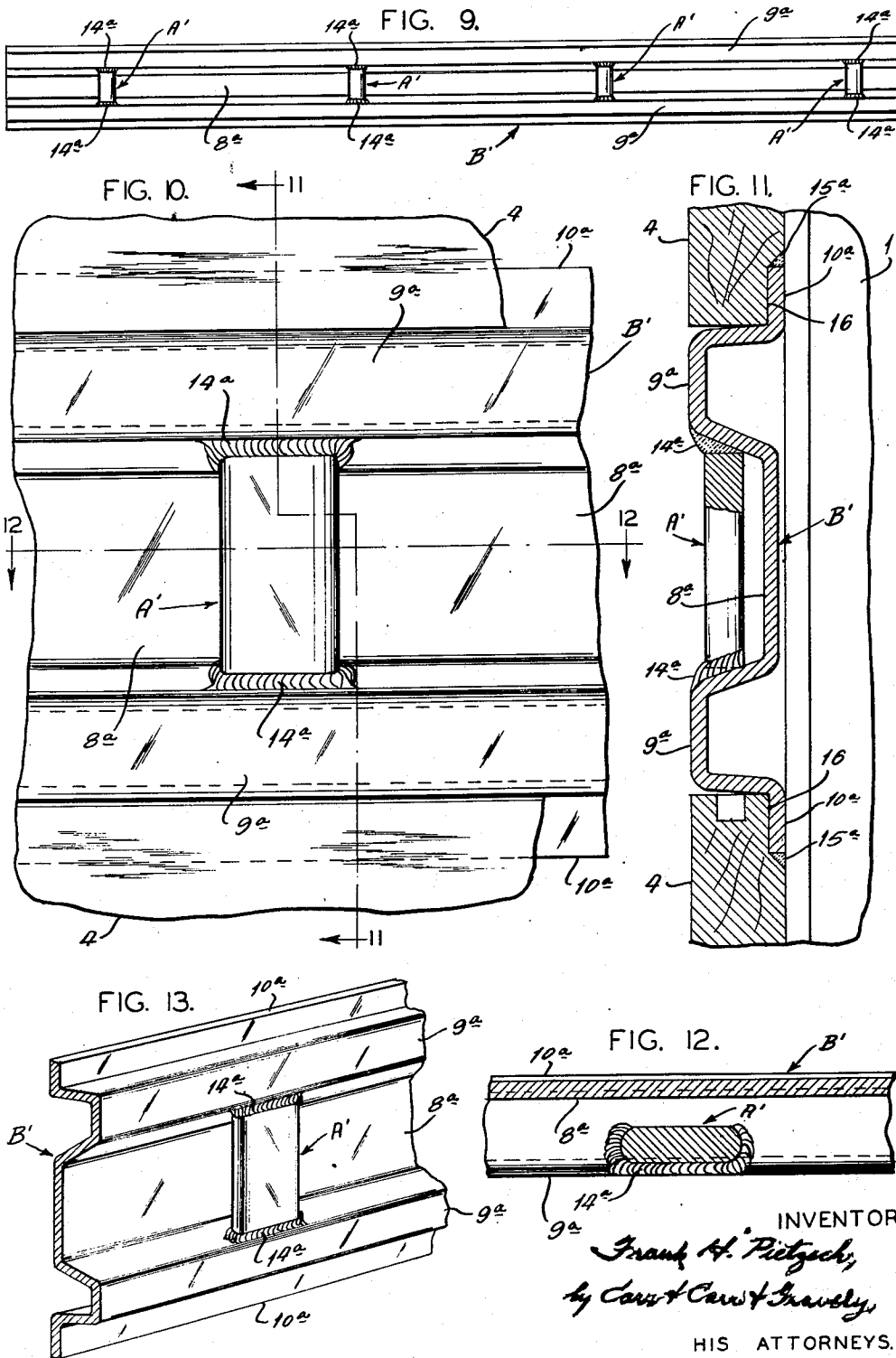
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UNITED STATES PATENT OFFICE

2,610,587

FREIGHT VEHICLE SIDE WALL WITH ANCHORING MEANS FOR LADING STRAPPING

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3 Claims. (Cl. 105-369)

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This invention relates to freight vehicles, particularly railway freight cars whose side walls are provided with anchors for strapping for holding lading in place in the car.

The principal object of the present invention is to provide a simple and economical side wall construction having a multiplicity of readily accessible lading strapping anchors rigid therewith and spaced apart both longitudinally and vertically thereof. Another object is to locate the anchors entirely within the side wall so as to maintain the maximum cubical capacity of the car. Another object is to provide for supporting a plurality of anchors in a single supporting member which forms part of the inner sheathing of a double sheathed car wall. Another object is to provide an anchor supporting member which is interchangeable with the lining boards of a double sheathed car wall. Another object is to provide an anchor supporting member which is secured to and extends from side post to side post of the car wall so as to increase the strength and rigidity thereof.

The invention consists in mounting a plurality of strap anchors in a single supporting member for unit handling and attachment to the car wall. It also consists in the shape of the supporting member and in the manner of mounting the anchors therein; and also consists in the parts and in the combinations and arrangements of parts hereinafter described and claimed.

The accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a part side elevational and part vertical longitudinal sectional view of a portion of a railway freight car having side walls provided with means embodying my invention for anchoring lading strapping thereto,

Fig. 2 is an enlarged vertical sectional view through one side wall of the car on the line 2-2 in Fig. 1,

Fig. 3 is an enlarged fragmentary inside elevational view of a portion of said side wall,

Fig. 4 is an enlarged horizontal sectional view on the line 4-4 in Fig. 3,

Fig. 5 is an enlarged vertical sectional view on the line 5-5 in Fig. 3,

Fig. 6 is a vertical sectional view on the line 6-6 in Fig. 5,

Fig. 7 is a fragmentary section, similar to Fig. 5, showing the manner of inserting the anchor members in the supporting member therefor,

Fig. 8 is an enlarged fragmentary horizontal sectional view on the line 8-8 in Fig. 1, showing

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the lading held in place by the strapping and one end of the strapping secured to one of the anchors in the adjacent side wall of the car,

Fig. 9 is a side elevational view of a multi-anchor unit of modified construction,

Fig. 10 is a fragmentary inside elevational view of the car wall with the modified multi-anchor unit shown embodied in the inside sheathing of said wall,

Fig. 11 is a vertical section on the line 11-11 in Fig. 10,

Fig. 12 is a horizontal section on the line 12-12 in Fig. 10; and

Fig. 13 is a perspective view of a portion of the modified multi-anchor unit.

In the accompanying drawings, my invention is shown embodied in a railway freight car having double sheathed side walls comprising metal side posts 1 of Z-shaped cross-section, metallic outside sheathing 2 secured to the outside flanges of said side posts, wooden nailing posts 3 mounted in the angles between the webs of the said side posts and the outer flanges thereof, flush with the inner side flanges thereof, and a wooden inside sheathing comprising a plurality of boards 4 that extend longitudinally of the wall in edge-wise abutting relation and seat flatwise against the inner flanges of the said side posts and are nailed flatwise to the inner sides of said nailing posts. The double sheathed car wall construction thus far described is well known and it is considered unnecessary to describe it in detail.

In accordance with my invention, each of the above described side wall constructions has a multiplicity of depressed upright anchor bars A mounted in the inner face of said wall in spaced relation both vertically and longitudinally thereof. As shown in Fig. 8, the flexible metal strapping 5 extends from side wall to side wall of the car for holding the lading 6 in place therein and has each end looped around the depressed anchor bars A in the inner faces of the adjacent car walls and secured to the body portion of the strapping by means of a suitable fastener 7.

In accordance with the present invention, a multiplicity of anchor bars A of each horizontal row is mounted in a single elongated pressed metal supporting member B comprising a central longitudinal channel 8, inverted hollow ribs 9 extending along opposite sides of said channel and outstanding side marginal base flanges 10 extending along the outer side walls of said ribs. The central longitudinal channel 8 and inverted hollow longitudinal side ribs 9 of the anchor bar support or carrier member B extend continuously

from end to end thereof and the outer side marginal flanges 10 of said member are located in the plane of the web or bottom of said channel. The anchor bars A are relatively wide, thin sections with flat opposite side faces 11 and rounded opposite side edges 12 and are mounted in the channel 8 cross-wise thereof in spaced relation longitudinally thereof and extend through aligned holes 13 provided therefor in the opposite sides of said channel with their flat sides 11 disposed parallel with the bottom thereof. The anchor bars A extend from side to side of the channel 8 and through the holes 13 in the sides thereof into the inverted hollow side ribs 9 and bear flatwise against the undersides of the tops thereof and are permanently secured in place by welds 14 that extend around said openings inside of said ribs. As shown in Fig. 7, the openings 13 in the sides of the channel are extended, as at 13^a, through the adjacent edges of the tops of the hollow side ribs 9 so as to facilitate insertion of the anchor bars A in said openings.

The elongated anchor bar supporting members B extend longitudinally of the car wall in vertically spaced relation and span the spaces between the metal side posts 1 with their outstanding side marginal flanges 10 and the bottoms of their channels 8 seated flatwise against the inner side flanges of said side posts. The members B are rigidly secured to the inner side flanges of the side posts 1 by means of welds 15 that extend along the outer side edges of the side marginal base flanges of said members. The horizontally extending members B are spaced apart vertically of the car wall. The combined overall width of the channel 8 and the inverted hollow ribs 9 on opposite sides thereof corresponds substantially to the width of a standard inside lining or sheathing board, whereby said members are interchangeable with some of said boards to take the place thereof in the inside lining. As shown in the drawings, the sheathing boards 4 immediately above and below the longitudinal anchor bar support B are rabbeted, as 16, to accommodate the outer side flanges 10 of said member and the securing welds 15 therefor.

In the modified multi-anchor unit shown in Figs. 9 to 13, inclusive, the central longitudinal channel 8^a of the anchor bar support B' is a rolled metal section similar to the hereinbefore described pressed metal anchor bar support B except that the central longitudinal channel 8^a is of less depth than inverted hollow side ribs 9^a and has sides that flare or diverge outwardly and are not provided with openings for the anchor bars. In this modified construction, the anchor bars A' extend from side to side of the channels 8^a and the square ends of said bars cooperate with the flared side of said channel to provide V-shaped spaces therebetween for welds 14^a for rigidly securing anchor bars in said channel clear of the bottom thereof and slightly below the top thereof. The anchor support B' is mounted on the side posts 1 with its side marginal base flanges 10^a seated on the inner sides thereof and secured thereto by welds 15^a along the edges of said flanges. As stated above, the depth of the channel 8^a is less than the side ribs 9^a, thereby spacing the bottom of said channel from said side posts and thus preventing heat transference by conduction between the metal side posts and channel and reducing the tendency of the channel to "sweat" or frost in cold weather. A further feature resides in the downwardly inclined lower sides of the anchor bar supporting

channels. The inclined sides prevent dust or other material from lodging in said channels.

The hereinbefore described construction has numerous advantages. The anchor bars are mounted wholly within the car wall, thereby maintaining the maximum cubical capacity thereof and are not apt to be struck or damaged by the lading; and the anchor bars are easily accessible for attachment of the lading strapping thereto. The anchor bars and supports therefor may be quickly and easily secured to the side posts of the car as a complete preassembled unit which has great strength and cooperates with said posts to increase the strength and rigidity of the car wall. The anchor bar supports are interchangeable with the sheathing boards of the inside lining of the car wall and are thus adapted to be substituted for any one of said boards to form part of the inside lining. The anchor bar supports also have grain-tight contact with the sheathing boards associated therewith.

Obviously, the hereinbefore described construction admits of considerable modification without departing from the invention. Therefore, I do not wish to limit it to the precise arrangements shown and described.

What I claim is:

1. In a freight vehicle side wall construction including side posts and lining boards secured to the side posts and spanning the spaces therebetween, a channel member disposed in the plane of and substantially coextensive with the lining boards and secured to the side posts between two adjacent lining boards, said channel member having a central channel opening in the plane of the lining boards and inverted hollow ribs along opposite sides of said central channel, said channel member having rib flanges lapping the lining boards to close the vehicle side wall along both sides of the member and further having a width and thickness corresponding to the width and thickness of the lining boards for interchangeability therewith, and a plurality of anchor members for lading strapping rigidly mounted in said central channel in longitudinally spaced relation, the ends of said anchor members being secured to said inverted hollow ribs along opposite sides of said central channel, and each of said anchor members being formed to have opposite flattened faces with one of said flattened faces parallel to and spaced from the bottom surface of the central channel.

2. In a vehicle side wall construction including side posts and lining boards secured to the side posts longitudinally of the vehicle, lading strapping anchoring means extending longitudinally of the vehicle and fitted into the plane of the side walls interchangeably with the lining boards to maintain a smooth wall surface, each of said anchoring means consisting in a channel member having a central channel portion opening inwardly of the vehicle side wall and hollow ribs at each side of the channel portion, each of said hollow ribs being closed to the vehicle interior and having a laterally extending flange engaging the adjacent side wall lining board to provide a tight closure in the longitudinal zone of engagement, said channel member further having said hollow rib flanges in a common plane behind the plane of said central channel portion for attaching the channel member to the side posts at said flanges with the central channel portion free of contact to reduce the heat transference by said channel members through the vehicle side walls, and a plurality of anchor mem-

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bers for lading strapping fixed across said central channel portion in spaced relation with the bottom surface thereof and arranged in longitudinally spaced relation.

3. In a vehicle side wall construction including side posts and lining boards of generally uniform thickness carried by the side posts longitudinally of the vehicle, lading strapping anchoring means secured to the side posts and fitted into the plane of the side walls and having a general thickness conforming with the thickness of the lining boards to maintain the surface thereof free of projections and sharp edges, each of said anchoring means consisting of a channel member having a central inwardly opening channel portion with angularly diverging sides and a hollow rib integral with each channel side and closed to the interior of the vehicle, said channel sides being free of openings and each of said hollow ribs having a flange thereon engaged with an extending in lapped relation behind the adjacent lining board to seal the vehicle interior against longitudinal openings, and a plurality of longitudinally spaced lading strapping anchor members welded to the opposite angularly di-

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verging channel side walls outwardly of the bottom face of the channel portion, each of said anchor members having its ends inwardly adjacent said channel side walls and being flattened in cross-section with a flattened face generally parallel to the bottom face of the channel portion.

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