Nov. 19, 1957 R. W. WRIGHT 2,813,495

BOX CAR SIDE AND END LINING

Filed April 12, 1954 2 Sheets-Sheet 1

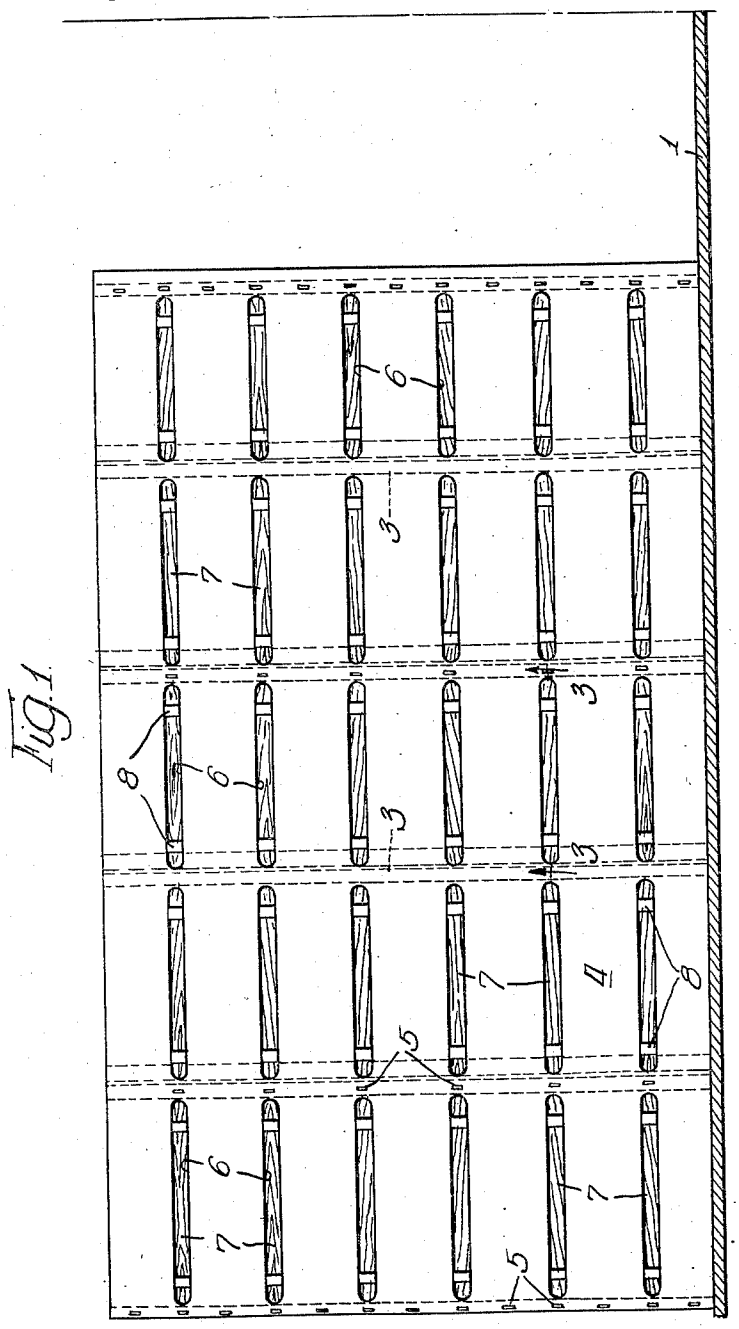


Fig. 1

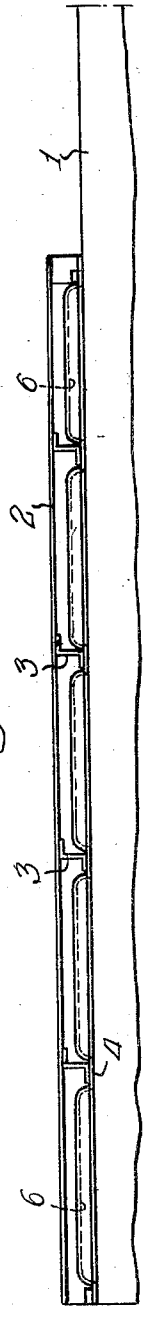


Fig. 2

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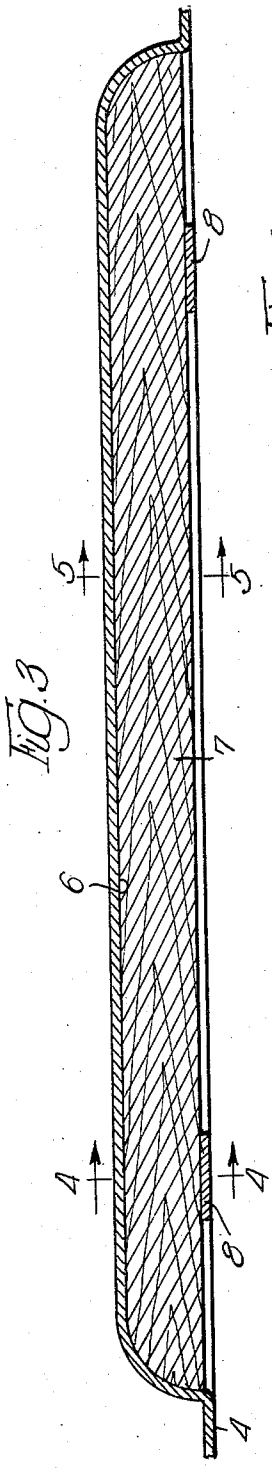


Fig. 3

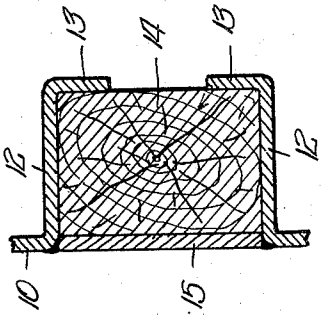


Fig. 6

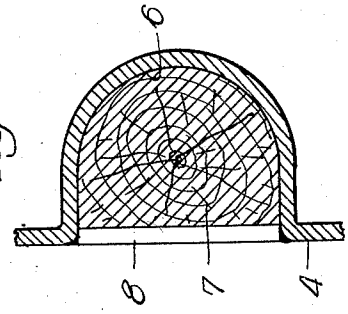


Fig. 5

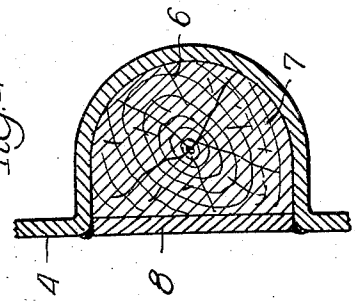


Fig. 4

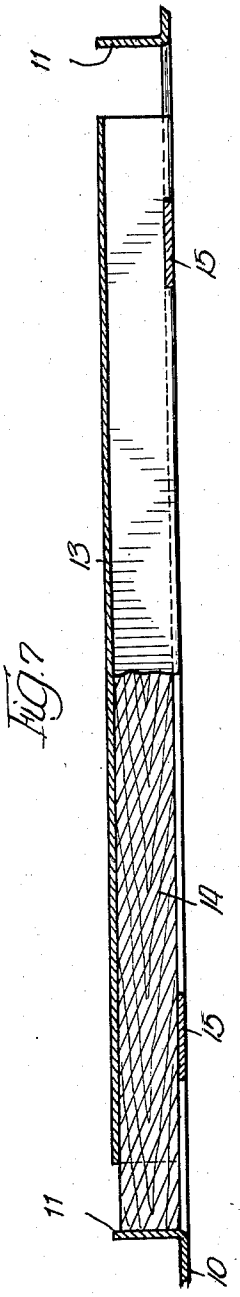


Fig. 7

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United States Patent Office 2,813,495 Patented Nov. 19, 1957

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BOX CAR SIDE AND END LINING

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Application April 12, 1954, Serial No. 422,458

3 Claims. (Cl. 105—369)

This invention relates to the wall structure of railway freight cars and in particular to such walls having metallic lining, to present a smooth surface to the lading, with said lining provided with non-metallic means for the anchoring of blocking braces, or the ends of high tension load retaining bands or straps.

In the past box cars generally have been constructed with wood linings, usually of plywood 5/8" to 3/4" in thickness to which blocking braces or load retaining bands may be attached. These linings soon become splintered, have holes punched therein, and are generally not substantial enough, in thickness particularly, to withstand the repeated nailing and abuse to which they are almost continuously subjected in use. It is, therefore, an object of the present invention to so form a metal lining for such cars that a non-metallic nailing block of substantial thickness may be secured thereto in a manner that it may be replaced with a new one when circumstances require.

It is a further object of the invention to provide a novel means of securing nailing blocks to the metal lining without interfering with the smooth inner surface of the lining.

Other objects and advantages of the invention will appear in the following description thereof.

Referring now to the accompanying drawing forming part of this application wherein like reference characters indicate like parts:

Figure 1 is a side elevation of a portion of the inside of a box car wall showing my improved lining applied thereto.

Figure 2 is a top view of Figure 1.

Figure 3 is a section on line 3—3, Fig. 1.

Figure 4 is a section on line 4—4, Fig. 3.

Figure 5 is a section on line 5—5, Fig. 3.

Figure 6 is a view similar to Figure 4 of a modified form of the invention.

Figure 7 is a view similar to Figure 3 of the modified form of the invention.

Referring now to the drawing in detail and particularly Figures 1 to 5, the car floor is shown at **1**, and the outer sheathing of the car at **2**. Side posts are shown at **3**, extending vertically as is customary from the side sill, not shown, to the side plate, also not shown. The side posts are spaced horizontally along the car wall and are usually of Z form, the side sheathing **2** being attached to the outer flanges of the posts, and the inner metal lining **4** being attached to the inner flanges of the posts with the webs of said posts extending normal to the wall, all as shown clearly in Figure 2.

In my present invention I have shown a plurality of rows of vertically spaced, relatively small openings **5** in the inner lining **4**, each row extending in a vertical line which overlies an inner flange of a side post **3**, so that the lining **4** may be plug welded or otherwise rigidly secured thereto.

Pressed outwardly from the plane of the lining are a plurality of rows of vertically and horizontally spaced depressions or short corrugations **6** of a length to extend

substantially between adjacent side posts. These corrugations are shown as being semi-circular in cross section, as clearly seen in Figures 4 and 5, although the specific shape of same is immaterial. Within these corrugations are placed preformed pieces of non-metallic nailing blocks **7** which neatly fit and substantially fill the corrugations **6**. To hold these nailing blocks in place narrow pieces of strip material **8—8** are welded across the corrugations **6** in the plane of the lining, as clearly seen in Figures 4 and 5, and thereby securely hold the nailing blocks within the corrugations. The strips **8—8** occur adjacent the ends of each corrugation, leaving substantial area of the blocks uncovered for the attachment thereto of the ends of lading anchors. If cars were used exclusively in a service requiring means for anchoring the ends of high tension lading straps, it is conceivable the wood fillers would be unnecessary since the ends of such straps could be placed around the strips **8** and be secured thereto.

When my improved wall lining is used at the ends of the car, it is necessary to secure to the inside of those ends which have horizontal corrugations therein, a plurality of spaced vertical strips which span the corrugations. These strips then provide the base to which the lining sheet can be plug welded through the small holes **5**, and the corrugations **6—6** extend within the valleys of the corrugations in the end.

It will be noted that with my improved lining providing means for anchoring lading retaining bands or the like, there is provided a smooth interior surface to the car with no projection therefrom which might interfere with the lading. Also that there are no openings through the sheet lining through which grain or other granular material may pass and thereby get behind the lining.

In Figures 6 and 7 a modification of the invention is shown wherein in lieu of the corrugations **6** being pressed in the sheet, the sheet **10** is slit longitudinally a distance less than the length of the corrugations and vertically at the ends of the slit, so that the ends may be bent, as at **11**, and the sides inwardly, as at **12**, and then towards each other, as at **13—13**, thereby forming sides, ends and a bottom to receive a rectangular nailing block **14**. Strips **15**, identical to strips **8** in the former modifications, are welded across the acre thus formed, to hold the blocks **14** in place.

I claim:

1. A railway car side wall construction comprising spaced vertical Z-shaped side posts, the webs of which extend transversely of said wall and the inner flanges of which are coplanar, a metallic sheet lining secured to said inner coplanar flanges and covering the side wall of the car, spaced horizontal corrugations pressed in said lining extending between the flanges of said Z-shaped posts and between adjacent posts, the depth of said corrugations being not greater than the width of said webs, non-metallic blocks within and shaped to fit said corrugations and means spanning said corrugations to hold said blocks therewithin, said blocks providing an anchor for lading strap.

2. A railway car side wall construction comprising spaced vertical side posts having web portions extending transversely of said wall, metal sheathing secured to the outside of said posts, and metal sheet lining secured to the inside of said posts and covering the side wall of the car, spaced corrugations pressed outwardly in said lining and extending within the wall between adjacent posts, nailable non-metallic blocks conforming to the shape of said corrugations within said corrugations and straps spanning said corrugations transversely to hold said blocks therewithin, said blocks providing means to secure lading strap thereto.

3. A railway car side wall construction comprising spaced vertical side posts having web portions extending

transversely of said wall, sheet metal lining secured to the inner edges of said posts and covering the interior walls of the car, horizontally and vertically spaced corrugations pressed outwardly in said lining and extending within the wall between adjacent posts, the depth of said corrugations being not greater than the width of said webs, nailable non-metallic blocks conforming to the shape of and within said corrugations and means spanning said corrugations transversely to hold said blocks therewithin, said blocks providing a nailable anchor for lading bands, said lining presenting a smooth surface to the interior of the car.

References Cited in the file of this patent

UNITED STATES PATENTS

717,540	Buhoup	Jan. 6, 1903
2,256,037	Reid	Sept. 16, 1941
2,300,449	Rowe	Nov. 3, 1942
2,440,830	O'Connor	May 4, 1948
2,610,587	Pietzsch	Sept. 16, 1952
2,681,715	Hansen	June 22, 1954
2,692,032	Peterson	Oct. 19, 1954
2,735,517	Peterson	Feb. 21, 1956
2,739,543	Candlin	Mar. 27, 1956