Nov. 6, 1956 K. F. NYSTROM 2,769,405

DOOR OR FRAMING POST FOR FREIGHT CARS INCLUDING LADING STRAP ANCHOR

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FIG. 1

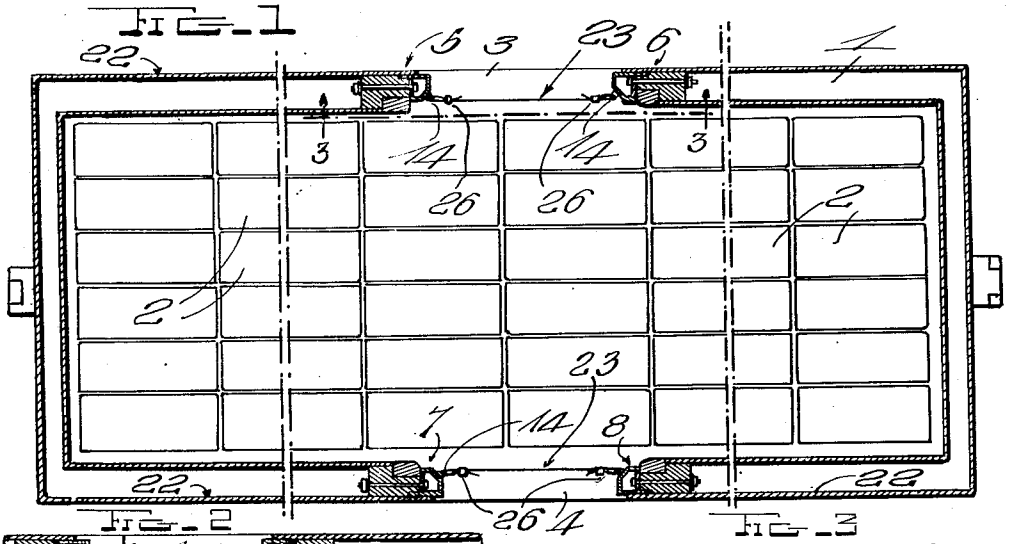


FIG. 2

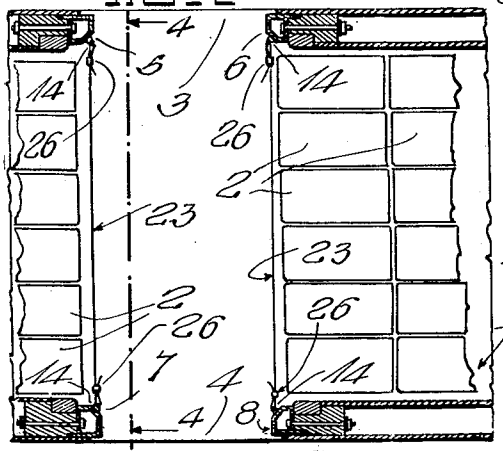
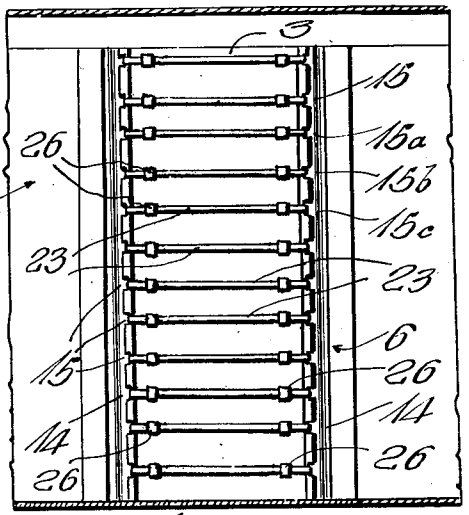


FIG. 3



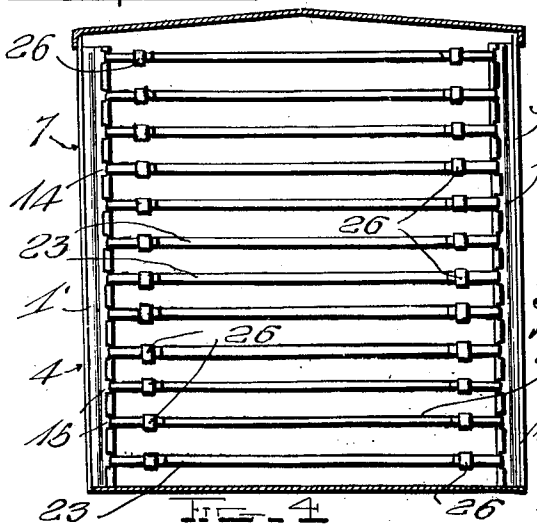


FIG. 4

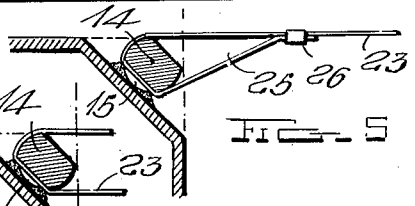


FIG. 5



FIG. 6

INVENTOR

Karl F. Nystrom,

BY John B. Brady ATTORNEY

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FIG. 7

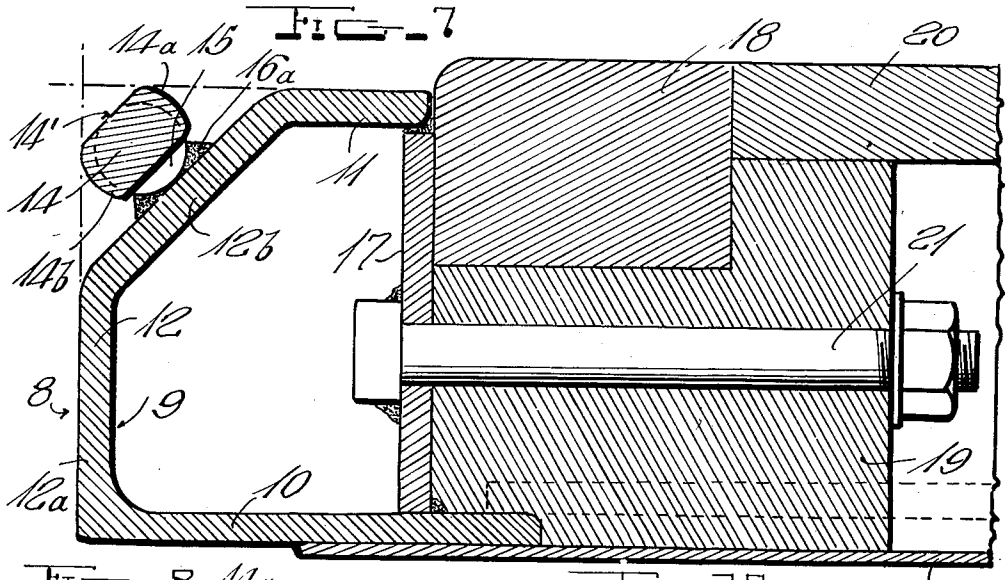


FIG. 8

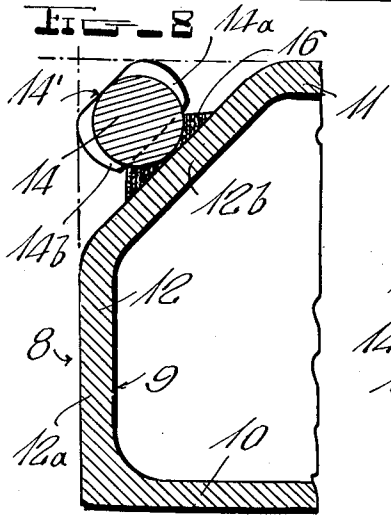
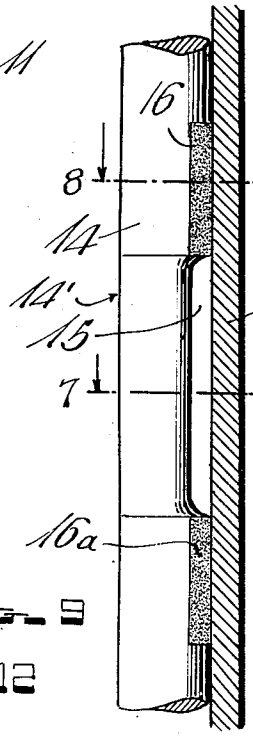


FIG. 10



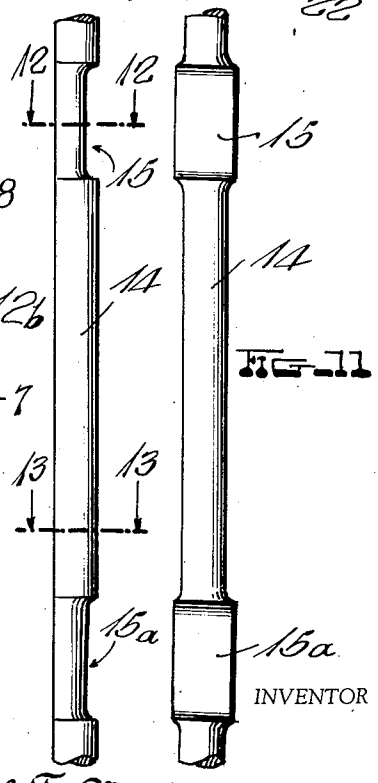


FIG. 11

FIG. 9

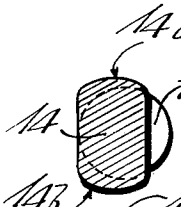


FIG. 12

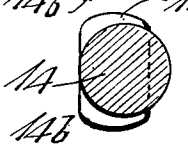


FIG. 13

INVENTOR

Karl F. Nystrom,

BY John B. Brady

ATTORNEY

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2,769,405

DOOR OR FRAMING POST FOR FREIGHT CARS INCLUDING LADING STRAP ANCHOR

Karl F. Nystrom, Chicago, Ill., assignor to International Steel Company, Evansville, Ind., a corporation of Indiana

Application January 7, 1952, Serial No. 265,245

2 Claims. (Cl. 105—369)

My invention relates broadly to railroad freight cars and more particularly to a construction of door posts and framing posts for freight cars for facilitating the lacing of lading straps therebetween for forming restraining bulkheads or partitions for protecting lading in a door opening or in a position transverse of the freight car.

One of the objects of my invention is to provide an improved construction of door post or framing post for freight cars for facilitating mass production of a composite post and lading strap anchor member in freight car construction.

Another object of my invention is to provide a construction of lading strap anchor member having coined depressions formed in spaced positions along the length thereof for providing passages for a lading strap, the anchor being welded to a door or framing post at opposite sides of each coined depression, all portions of the anchor being confined within planes co-extensive with the sides of the door or framing post eliminating all sharp edges which might cause damage to the lading, particularly where the lading consists of fragile packages.

Still another object of my invention is to provide a composite lading strap anchor member and door or framing post for freight car construction wherein the lading strap anchor member is welded at spaced intervals along an angularly inclined corner surface of the door or framing post where the portions of the lading anchor are coined in the spaces between the welds for offsetting the material of the anchor to projected positions sufficient to provide openings for lading straps between the coined portions but restricted to positions not protruding beyond planes extending coplanar with adjacent side walls of the door or framing post.

Another object of my invention is to provide a composite construction of lading strap anchor member and door or framing post for freight cars where the lading strap anchor member includes coined portions spaced along the length thereof and forming slots for the passage of lading straps with the anchor welded to the post adjacent opposite ends of the coined portions and wherein the material of the anchor on opposite sides of the coined portions is displaced to positions which are substantially tangent to planes extending coincident with adjacent side walls of the door or framing posts.

Other and further objects of my invention reside in a practical construction of composite lading strap anchor member and door or framing posts for freight cars which is capable of inexpensive production and assembly in mass production of freight cars, as set forth more fully in the specification hereinafter following by reference to the accompanying drawings, in which:

Figure 1 is a horizontal sectional view taken through a typical freight car, the view being foreshortened to illustrate more particularly the center door portion of the freight car and showing the composite lading strap anchor member and door or framing post constructed and installed in accordance with my invention for securing lading adjacent the side doors of the freight car; Fig. 2 is a view similar to the view illustrated in Fig. 1 but illustrating a fragmentary portion of the freight car adjacent the center door openings thereof and showing particularly the versatility of the composite structure of my invention which enables the lading straps to be installed transversely of the freight car to form bulkheads or partitions rather than securing means at the open doors of the freight car as in Fig. 1; Fig. 3 is a vertical sectional view taken substantially on line 3—3 of Fig. 1 and illustrating the manner of installing the lacing strap between the composite door or framing posts and the lading strap anchor members associated therewith; Fig. 4 is a transverse sectional view taken on line 4—4 of Fig. 2 and illustrating the lading strap installed in position on the lading strap anchor members and extending transversely of the freight car instead of across the side door opening as illustrated in Fig. 3; Fig. 5 is a fragmentary transverse sectional view of the composite door or framing post showing the angularly inclined face thereof on which the anchor strap member of my invention is secured and showing particularly the manner of confining the end of the lading strap at the commencement and end of the lacing operation; Fig. 6 is a fragmentary view similar to the view illustrated in Fig. 5 showing the manner of lacing the lading strap around the lading strap anchor member in anyone of the intermediate positions along the height of the lading strap anchor members and associated door or framing posts; Fig. 7 is an enlarged transverse sectional view through the composite door or framing post and lading strap anchor member, the view being taken on line 7—7 of Fig. 9, showing the passage for the lading strap between the door or framing post and the lading strap anchor member provided by coining the lading strap anchor member at spaced intervals along the length thereof; Fig. 8 is a fragmentary horizontal sectional view similar to the view shown in Fig. 7, but illustrating the structure of the lading strap anchor member intermediate the spaced coined portions thereof on line 8—8 of Fig. 9; Fig. 9 is a fragmentary side elevational view of the lading strap anchor member installed in position on the angularly inclined surface of the door or framing post which is shown in section; Fig. 10 is a side elevational view of a fragmentary portion of the lading strap anchor member showing the coined portions disposed at spaced intervals along the length thereof, but illustrating the lading strap anchor member prior to the welding thereof to the inclined wall surface of the door or framing post; Fig. 11 is an elevational view of a fragmentary portion of the lading strap anchor member illustrated in Fig. 10 showing particularly the spaced coined portions of the lading strap anchor member; Fig. 12 is a transverse sectional view on line 12—12 of Fig. 10 and Fig. 13 is a transverse sectional view on line 13—13 of Fig. 10.

My invention is directed to a composite structural unit of door or framing post and a coined lading strap anchor member for freight cars where the coined lading strap anchor member is so associated with an angularly disposed corner surface of the door or framing post that the lading strap anchor member does not project beyond adjacent faces of the door or framing post. Moreover, the structural unit of my invention presents a surface to the lading which is free of sharp edges, thereby preventing damage to the lading particularly where the lading consists of relatively fragile packages. The lading strap anchor member is readily formed inexpensively and rapidly on a mass production scale by coining the lading strap anchor member in spaced intervals for displacing the material thereof at spaced intervals to provide sufficient space between the inclined wall of the door or fram-

ing post and the said member at the coined positions therein for the passage of a lading strap, the said member being welded to the inclined surface of the door or corner post at each end of the coined portions thereof. The lading strap anchor member is so positioned with respect to the inclined wall surface of the door or framing post that planes drawn substantially tangent to the surface of the coined portion of the lading strap anchor member substantially coincide with planes through the surface of adjacent side walls of the door or framing post. By this arrangement the composite door or framing post and lading strap anchor member may be utilized in installing partitions or bulkheads across the door openings and/or transversely of the freight car.

Referring to the drawings in detail, reference character 1 in Fig. 1 designates a conventional freight car loaded with the lading which I have represented at 2 and which may be packed entirely across the side door openings 3 and 4 of the freight car. The composite door or framing post and lading strap anchor member has been shown installed at positions 5, 6, 7 and 8 in Figs. 1 and 2. The structure of each composite door or framing post and lading strap anchor member is symmetrical and for purposes of explaining the construction in Fig. 7, post 8 is represented as typical of each of the illustrated positions. In Fig. 7 I have shown the door or framing post at 9 comprising a vertically extending metallic section projecting from the base structure of the freight car to the roof structure thereof and comprising a linear section of approximately U-shaped contour with one side exceeding the length of the other side forming a pair of substantially parallel extending spaced side walls 10 and 11 interconnected by end wall 12. The end wall 12 consists of a portion 12*a* extending normal to the side walls 10 and 11 and a portion 12*b* extending at substantially 45 degrees to the surface of end wall 12*a* and side wall 11. The position of the angularly disposed portion 12*b* of the end wall is selected in coordination with the mounting of the lading strap anchor member 14 to enable the door or framing post to be used either as a part of the side door structure of the freight car or as part of a transverse partition across the freight car. That is to say, the corner of the door or framing post 9 is mitered and the lading strap anchor member substantially fills the corner portion but does not project beyond the limits defined by planes projected from the adjacent side and end wall of the door or framing post. The openings 15 are so disposed that the lading strap can be directed into the door or framing post from a direction substantially coplanar either with the end or adjacent side wall of the door or framing post.

The lading strap anchor member 14 comprises a circular steel bar of approximately ¾" diameter for a door or framing post having a transverse width of 3 9/16" across the external faces of side walls 10 and 11. The dimensional proportion for the width of the end wall portion 12*a*, in order to obtain the advantages secured by my invention for the dimension hereinbefore recited, is approximately 1 3/32". The bar 14 is initially prepared by coining the bar at spaced intervals as shown more particularly in Figs. 5 and 6, each coined portion of the bar having a width of approximately 2" and the distance from center to center of the coined portions of the bar being approximately 10". The coining of the bar is accompanied by a displacement of the material of the bar in the coined portion away from the securing surface of the bar for a distance of approximately 3/16" providing an opening 15, 15*a*, 15*b*, 15*c*, etc. sufficient for the insertion and passage of a lading strap. The lading strap may be a band of flexible metal or stout interwoven hemp. The lading strap anchor member 14 is welded to the center of the inclined end wall 12*b* on each side of the coined depression as represented at 16 and 16*a* for securing the lading strap anchor member in a position

coincident with a plane extending through the vertical axis of the door or framing post 9. The coining of the bar constituting the lading strap anchor member 14 is accompanied by a displacement of the metal of the bar represented more clearly in Figs. 7, 8, 11, 12 and 13 where the lading strap anchor member 14 is transversely enlarged at each end thereof represented at 14*a* and 14*b*. The deformation of the section of the bar, however, is restricted in one direction to a plane coincident with the external surface 14' of the lading strap anchor member 14. The projecting side portions 14*a* and 14*b* of the lading strap anchor member 14 are restricted to positions which do not protrude beyond planes coincident with the end wall portion 12*a* and the side wall 11 of the door or framing post 9. In the preferred construction of my invention the enlarged projections 14*a* and 14*b* of the lading strap anchor member 14 are formed on curves with respect to which planes extending from the external surfaces of the end wall portion 12*a* and the side wall 11 are substantially tangent. I have found this construction particularly effective in eliminating sharp edges or obstructions which can cause damage to the lading.

The interior surface of the side walls 10 and 11 of the door or framing post 9 are interconnected by a transverse plate 17 welded thereto at each end of the plate. The reenforcement means for the side wall structure of the fright car has been shown generally at 18, 19 and 20 to which the door or framing post 9 is secured by bolt member 21. The side wall of the freight car is represented at 22 extending over the reenforcement means 19 and over the side wall 10 of the door or framing post 9.

The lading strap is shown at 23 in Fig. 3 laced through the openings 15, 15*a*, 15*b*, 15*c*, etc. between the door or framing post at positions 5 and 6 for protecting lading against shifting adjacent the door positions 3 and 4. In Fig. 4 I have shown the manner of utilizing aligned door or framing posts at positions 5 and 7 for lacing the lading strap 23 transversely of the freight car and providing a partition or bulkhead for preventing the shifting of the lading into the transverse space at the door positions of the freight car. The lading strap 23 is looped through the opening 15 in the lading strap anchor member 14 adjacent the top of the freight car as represented at 25 in Fig. 5 and the end of the lading strap secured upon itself by use of a special tool that pulls the adjacent aligned portions of the strap tight and in a second operation applies and crimps a securing band 26 transversely of the straps. The lading straps are laced horizontally as shown with their ends extending through the openings 15 in the lading strap member 14 as represented in Fig. 6. Each lacing is made individually and the free end of the lading strap represented at 25 in Fig. 5 secured to the adjacent aligned portion of the strap 23 by the crimping tool which squeezes the aligned portions of the strap together as shown at 26. In Fig. 5 I have shown but one end of the lading strap 23 secured by the cross band 26, but it will be understood that the opposite end of the lacing strap is secured in a symmetrical manner by the crimping tool as the straps are individually applied.

The angularly disposed end wall 12*b* for each of the door or framing posts serves as a pocket for the mounting of the lading strap anchor member 14 in such position that minimum obstruction is offered to loading and unloading operations during the frequent ingress and egress of trucks, operatives or lading with respect to the freight car. After the partition or bulkhead has fully served its purpose the straps can be severed at the ends 25 and the straps removed to allow access to the cargo.

The structure of my invention has proven highly practical in manufacture and production, and while I have described certain preferred embodiments of my invention, I realize that modifications may be made, and I desire that it be understood that no limitations upon my invention are intended other than may be imposed by the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. A composite door post and a lading strap anchor member comprising a vertically extending metallic member having a pair of substantially parallel side walls and an end wall angularly mitered at one corner thereof and a lading strap anchor member attached to the mitered corner of said metallic member and having bodily displaced portions disposed at spaced intervals along the length of said anchor member, said displaced portions being directed away from the surface of the corner of said metallic member for providing spaced openings for the passage of a lading strap between said anchor member and the mitered corner of said metallic member, said lading strap anchor member being of substantially circular section with the bodily displaced portions transversely enlarged at said spaced openings and formed on curves with which planes contiguous with the end and the side wall immediately adjacent the mitered corner of said metallic member are substantially tangent.

2. A composite door post and a lading strap anchor member comprising a vertically extending metallic member having a pair of substantially parallel spaced side walls integrally interconnected by an end wall, said end wall comprising a flat portion extending in a plane normal to one of said side walls and integrally connected therewith

and an angularly disposed portion integrally connected with said flat portion and disposed at an angle of approximately 45 degrees and integrally connected with the other of said side walls, a lading strap anchor member secured to said angularly disposed portion and having bodily displaced portions disposed at spaced itnervals along the length of said anchor member, said displaced portions being directed away from the surface of the corner of said metallic member for providing spaced openings for the passage of a lading strap between said anchor member and the angularly disposed portion of said metallic member, said lading strap anchor member being disposed within the confines of planes projected from the flat portion of said metalic member and from the side wall of said metallic member which is contiguous with said angularly disposed portion and a fastening plate connected between the side walls of said metallic member and extending longitudinally thereof in a position spaced from both said flat portion and the angularly disposed portion of said metallic member said fastening plate being disposed in a plane substantially parallel with the plane of said flat portion.

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