Oct. 17, 1967 LE ROY C. BUTCHER 3,347,175

RAILROAD CAR SIDE SILL CONSTRUCTION

Filed March 9, 1965 2 Sheets-Sheet 1

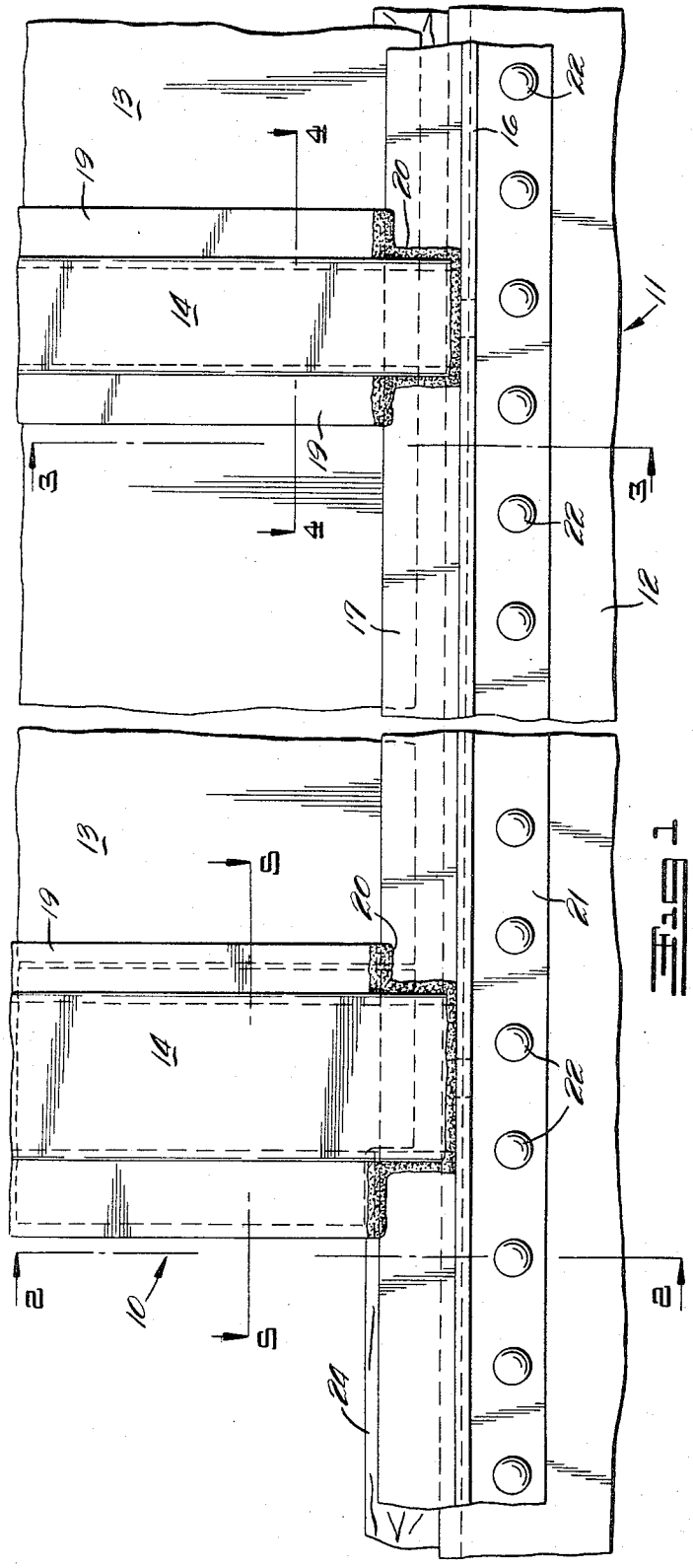


Fig. 1

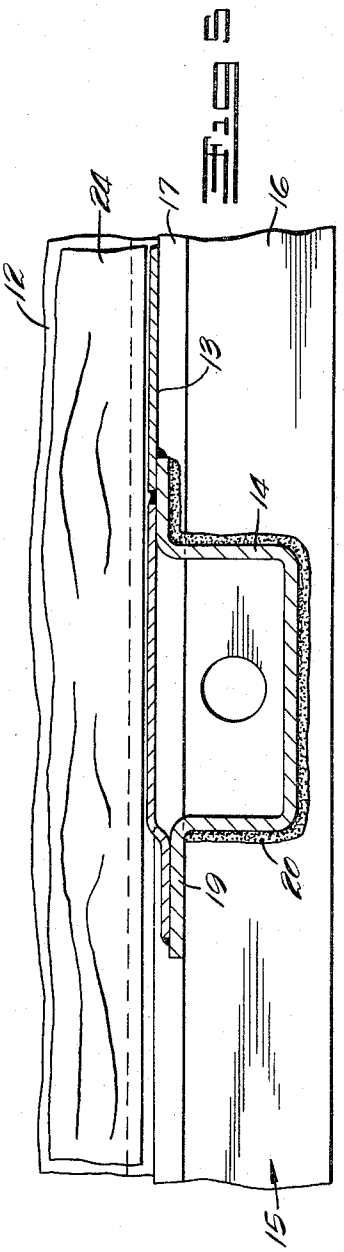


Fig. 5

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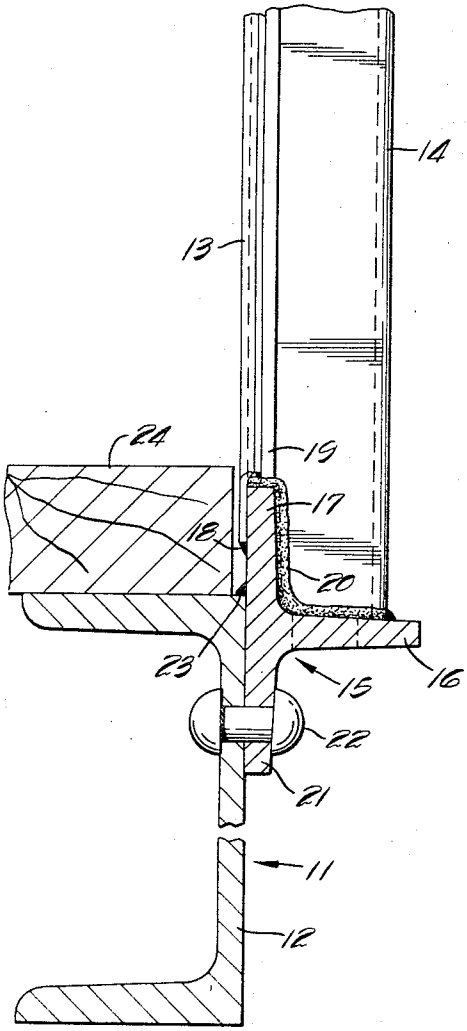


Fig 2

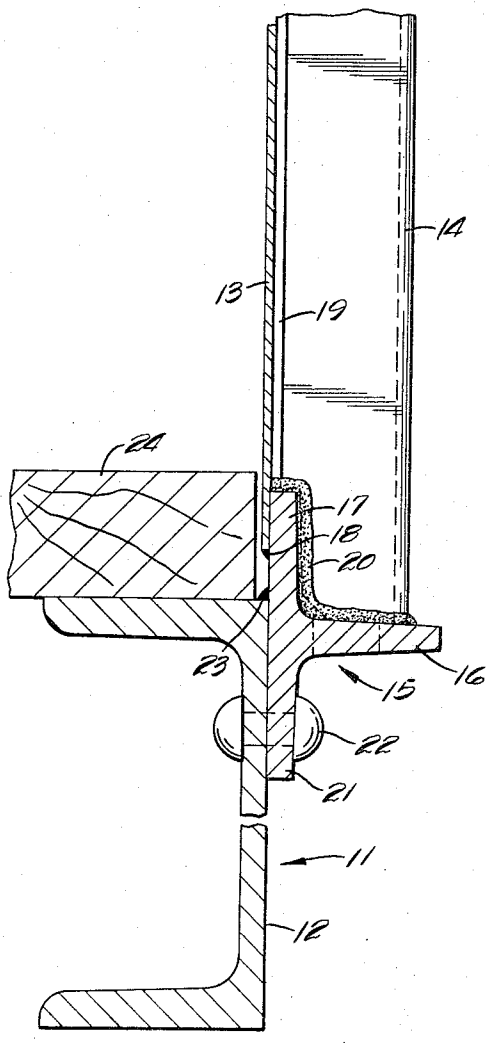


Fig 3

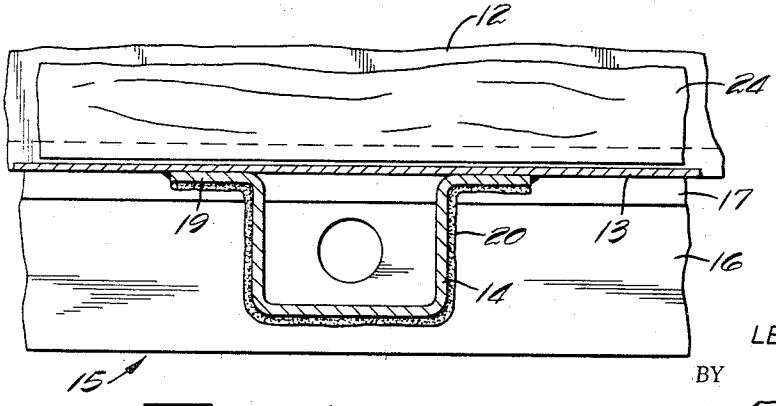


Fig 4

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RAILROAD CAR SIDE SILL CONSTRUCTION

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9 Claims. (Cl. 105—409)

This invention relates to a railroad car side sill construction and more particularly to a novel means for supporting a railroad car side wall and supporting said side wall on the underframe of the railroad car.

The primary object of the invention is to provide a simplified side sill construction which includes a secondary side sill member adapted to form a base for the assembly of the side wall sheathing and the wall posts.

A more specific object of the invention is to provide a side sill construction which includes a T-shaped member adapted to be secured directly to the side sill of the railroad car, with the side walls being supported on the T-shaped member.

Another object of the invention is to provide a side sill construction for a railroad car which includes the use of a T-shaped member extending along the entire length of the railroad car, with the leg of the T projecting outwardly of the railroad car in a horizontal position thereby providing a ledge or platform on which the posts for the side walls of the railroad car may be supported.

A still further object of the invention is to provide a side sill construction for a railroad car which includes a T-shaped member having a leg of the T horizontally oriented with the side walls and the wall posts being supported on the T-shaped member whereby a subassembly comprising the side walls, posts and T-shaped member may be attached as a unit to the side sill forming the underframe of the railroad car.

More particularly, the invention contemplates a side sill construction for a railroad car which comprises a side sill extending the length of the car, a sill member coextensive with said side sill, means securing said sill member to said side sill, said sill member being T-shaped in cross-section with the leg of said T being transverse to said side sill, side wall sheathing secured to said sill member and wall posts supported on and secured to said leg of said T-shaped member whereby said wall sheathing and wall posts together with said sill member may be attached to said side sill as a unit.

Other and more complete objects will become apparent upon a complete reading of the following specification which sets forth in detail but one approved means for carrying out the invention. Such disclosed means is not meant to be limiting since it constitutes but one of the various ways in which the principles of the invention may be employed.

In the drawings wherein like reference numerals indicate like parts in the various views:

FIG. 1 is a partial side elevation view of the side of the railroad car and illustrates the placement of the side sill construction on a car;

FIG. 2 is a sectional view taken along lines 2—2 of FIG. 1 and illustrates the connection between the side sill and the side wall;

FIG. 3 is a sectional view taken along lines 3—3 of FIG. 1;

FIG. 4 is a sectional view taken along lines 4—4 of FIG. 1;

FIG. 5 is a sectional view taken along lines 5—5 of FIG. 1.

Referring to the drawings and more particularly to FIG. 1 thereof, the reference numeral 10 indicates generally a railroad car, only a partial segment thereof being illustrated. The railroad car includes an underframe, indicated generally by the reference numeral 11. The underframe of a railroad car ordinarily includes a pair of side sills, one on either side of the car and extending the length of the car, together with cross members or bolsters. Only one side sill 12 is illustrated herein, it being understood that a similar sill would be employed on the opposite side. The railroad car further includes side walls composed of sheathing 13 and vertically extending reinforcing wall posts 14 which are secured to the sheathing.

It frequently occurs in the railroad industry that a manufacturer will fabricate the side walls of a railroad car separately from the underframe of the car and the side walls will be shipped as a unit to a second manufacturer who has fabricated the underframe and carriage. In such circumstances, it is necessary that particular care be exercised in designing the lower portion of the side walls which are adapted to be joined to the side sill so that a strong joint between the underframe of the car and the side walls of the car may be obtained. Moreover, since two separate manufacturers frequently fabricate the side walls and the underframe, it is necessary that the side wall be designed as an independent unit capable of attachment to the underframe.

Referring to FIGS. 2 and 3, the walls 13 and posts 14 are illustrated as being supported on a sill member 15. The sill member is generally T-shaped in cross-section and is adapted to be coextensive with the side sill 12. The sill member includes a transverse leg 16 which provides a ledge on which the wall posts 14 may be supported. In addition, one arm 17 of the sill member 15 provides, in effect, a base plate to which the lower edge of the wall sheathing may be secured as by welds 18.

The wall posts 14, as illustrated in FIGS. 4 and 5, are hat-shaped in cross-section with flanges 19 adapted to abut the sheets 13 for securement thereto. The flanges 19 are discontinued at a point above the lower end of the wall posts so that with the posts resting on the ledge afforded by the leg 16, the flange 19 terminates adjacent the upper end of the arm 17. Weld material 20 is then applied along the abutting edges of the lower end of the post 14 and the sill member 15 thereby to provide a rigid connection between the post and the sill member. It will be appreciated that the use of a sill member 15 provides a base on which the side wall of the car may be fabricated thereby facilitating the assembly of the wall. In addition, the sill member provides a simple, yet sturdy means whereby the wall may be joined to the car underframe. Thus, the sill member 15 includes an additional arm 21 which is adapted to have a plurality of holes placed therein, which holes will correspond with similar holes in the side sill 12. The side wall may be attached to the side sill by rivets 22 passing through these matching holes. It is readily apparent that by this means, the manufacturer of the side wall is fully capable of completely manufacturing the wall independently of the underframe manufacturer with the only mating parts being the respective holes through the side sill 12 and the sill member 15.

In addition to the rivets 22, the sill member 15 may be secured with weld material 23. In this connection, it is to be noted that the sill member 15 is positioned against the side sill 12 with the leg 16 displaced below the welded joint 23. This arrangement provides a desirable joint in that the leg 16 is between the two points of attachment, the rivets 22 and the weld 23.

Flooring 24 is placed in the railroad car and rests on the upper surface of the side sill 12. As is apparent from an inspection of FIGS. 2 and 3, the flooring extends above the arm 17 of the sill member 15 thereby overlapping the wall sheathing 13 and concealing the welded connections 18 and 23.

The above described assembly is particularly suited for a car using single sheath walls. In the event a double

sheath wall is desired, the sill member **15** may be reversed with the leg **16** extending inwardly of the car.

Additional modifications and changes will suggest themselves to those having ordinary skill in the art. Changes such as these are contemplated by the principles of this invention so that although for ease of description, the principles of the invention have been set forth in connection with but a single illustrated embodiment, it is not intended that this illustrated embodiment or the terminology employed in describing it is to be limiting; but rather, it is my desire to be restricted only by the scope of the appended claims.

I claim:

1. A side wall construction for a railroad car comprising:

a side sill extending the length of the car;

a sill member coextensive with said side sill;

means securing said sill member to said side sill;

said sill member being T-shaped in cross-section with the leg of said T being transverse to said side sill;

side wall sheathing secured to said sill member; and

wall posts secured to said side wall sheathing;

the lower ends of said wall posts resting on and being secured to said leg of said T-shaped member.

2. The side wall construction of claim **1** wherein said side wall sheathing is secured to one arm of said T-shaped sill member.

3. A side wall construction for a railroad car comprising:

a side sill extending the length of the car;

a single unitary sill member coextensive with said side sill and being T-shaped in cross section with the leg of said T extending transversely of the longitudinal axis of said side sill;

means securing said sill member to said side sill;

side wall sheathing supported on and secured to said sill member; and

vertically extending wall posts secured to said sheathing;

the ends of said wall posts extending below said sheathing with the ends of said posts resting on and secured to said leg of said T-shaped member whereby said sill member, wall post and sheathing comprise a subassembly separate from said side sill.

4. The construction of claim **1** wherein said sill member is secured to said side sill adjacent the upper edge thereof with said leg of said member being disposed below the upper surface on said side sill.

5. The construction of claim **4** wherein one arm of said T-shaped member extends above the upper surface of said side sill.

6. In a railroad car having side walls and flooring;

a side sill having an upper surface supporting the flooring and extending the length of the railroad car;

a sill member coextensive with said side sill;

said sill member being T-shaped in cross-section and having oppositely directed arms and a transverse leg;

means securing one of said arms to said side sill on the upper portion thereof with said leg extending transverse of said sill and the other of said arms extending above said side sill;

side wall sheathing secured to said sill member; and

wall posts supported on said leg of said sill member whereby said sill member, wall posts and sheathing comprise a subassembly separate from said side sill.

7. The combination of claim **6** wherein said side wall sheathing is secured to said other of said arms.

8. The combination of claim **6** wherein said wall posts are secured to said leg and said other arm.

9. The combination of claim **6** wherein said sill member is secured to said side sill with said leg positioned below said upper surface of said side sill;

said side wall sheathing being secured to said other of said arms on one side thereof;

said wall posts being secured to said leg and said other of said arms on the other side thereof.

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