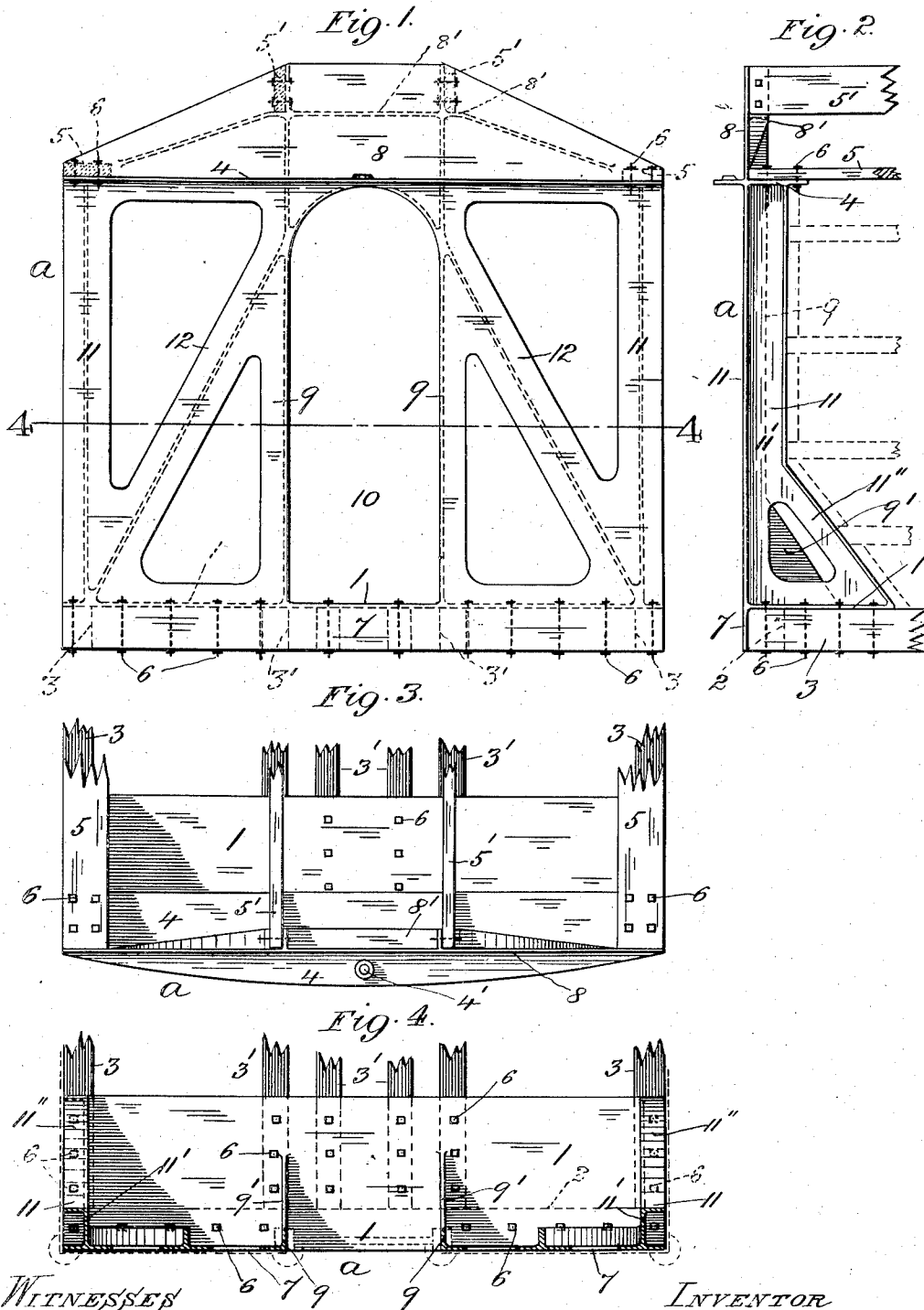


H. M. PFLAGER.
CAR FRAME.
APPLICATION FILED FEB. 15, 1908.

929,705.

Patented Aug. 3, 1909.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

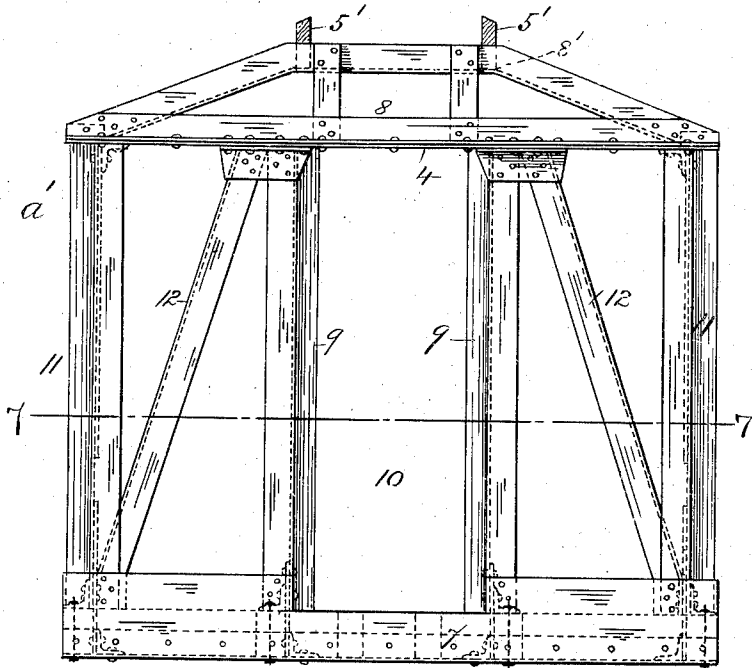


Fig. 6.

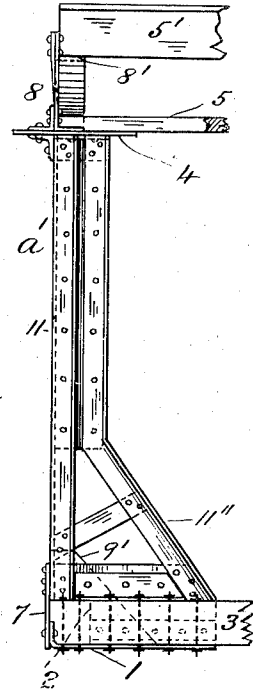
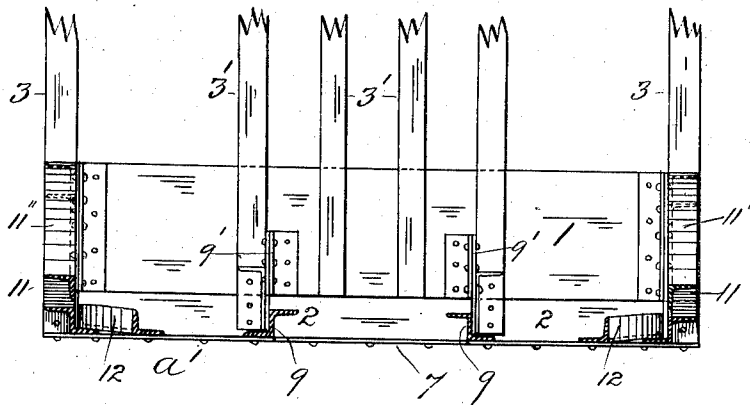


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

HARRY M. PFLAGER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO DOUBLE BODY BOLSTER COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

CAR-FRAME.

No. 929,705.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed February 15, 1908. Serial No. 416,070.

To all whom it may concern:

Be it known that I, HARRY M. PFLAGER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Car-Frames, of which the following is a specification.

My invention relates particularly to the end framework of a railroad car, and has for its object to provide a strong, rigid, and durable metallic end frame specially designed to resist abnormal shocks and telescoping, to form a brace to the longitudinal members of the car body, and to transmit the end stress uniformly therethrough.

It consists in features of novelty as hereinafter described and claimed, reference being had to the accompanying drawing forming part of this specification, whereon,

Figure 1, is a front elevation of my improved end frame; Fig. 2, a side elevation thereof; Fig. 3, a top plan of the same; Fig. 4, a horizontal section through the frame on line 4, 4, in Fig. 1, and Figs. 5, 6, and 7, views corresponding to Figs. 1, 2, and 4, respectively, showing a modification of the construction.

Like letters and numerals of reference denote like parts in all the figures.

a represents my improved car end frame, which is preferably, composed of cast steel integral throughout (but may be built up of separately formed pieces) and comprises preferably, a bottom horizontal plate 1 which extends across and bears against the top (or underside) of the end sill 2 and longitudinal sills 3 and 3' of the underframe at and for a suitable distance rearward from the outer face of the end sill 2, and a top horizontal plate 4 extending across the car body and bearing against the end portions of the side framing plates 5 preferably on their underside, the plates 1 and 4 being fixed to the sills 2, 3, and 3', and side framing plates 5 respectively, by bolts 6 (rivets, or otherwise).

The top and bottom plates 1 and 4 are connected to each other by a suitable arrangement of members which are adapted to span and form the end framing of the car body in lieu of the ordinary supporting wood end and corner posts, door posts and lintels, and end transverse timbers thereof, and consists in the present case, preferably, of a bottom horizontal member 7 which unites with the bottom plate 1 along its front edge in a

vertical plane or at right angles thereto, and bears against the front side of the end sill 2, and a horizontal top member 8 arranged in the plane of the bottom member 7 and intersecting the top plate 4 at right angles thereto, the top member 8 being adapted to bear against the ends of the side framing plates 5 and deck-sills 5', and having an inner horizontal rib or flange 8' adapted to form a seat or bearing for the end portions of the deck sills 5'. It is here noted that the front portion of the top plate 4 projecting outward from the top member 8 overhangs and forms a brace to the end of the car body thereat, and through this overhanging portion is formed an opening 4' for receiving the bolt or pin for carrying the vestibule diaphragm equalizer (not shown).

The members 7 and 8 are connected to each other at their middle part by two opposite upright L-shaped members 9 (one on each side of and at an equal distance from the longitudinal center of the car) which are adapted to form the posts of the door-way 10 of the car, one leg of each member 9 being in the plane of the members 7 and 8 and its other leg uniting at the top with the rib 8' of the member 8 and formed at the bottom with a reinforcing brace 9' which extends rearward for a suitable distance across and unites with the bottom plate 1. Furthermore, the members 7 and 8 are connected to each other at each side of the car body by an upright channel-shaped bracket 11 having its web 11' arranged inward and having preferably, a double flange at one side in the plane of the members 7 and 8, the web 11' uniting at the top with the top plate 4 and formed at the bottom with a preferably, gusset-shaped brace 11'', which extends rearward across, and unites with the bottom plate 1, immediately over the outer longitudinal sill 3, or thereabout, and end sill 2 thereat, the other flange of the bracket 11 conforming thereto.

Each upright member or door post 9 is connected at its upper part to the corresponding side bracket 11 at the junction thereof with the bottom plate 1, by a T-shaped diagonal member or brace 12 having its flanges in the plane of the top and bottom members 7 and 8, the whole forming a strong and rigid metallic structure adapted to tie the longitudinal members of the car body together and to shield and protect the interior of the car, by intercepting, diverting, and

transmitting all end shocks thereon directly through the said members; also, by this construction in case of collision when one car rides over the platform of the other, the telescoping of the cars will be resisted by the frame, and especially by the bottom reinforcing brackets 9' and 11''.

Figs. 5, 6, and 7, show my improved end frame *a'* built up of separately formed plates and commercial sized rolled bars in lieu of an integral casting, but is otherwise substantially the same in general configuration and disposition of its members as the frame previously described and shown in Figs. 1 to 4.

I do not limit myself to the particular shape and arrangement of the top and bottom plates 1 and 4 and their connecting members 7, 8, 9, 11, as these obviously may be modified in various ways for effecting the principle of my invention. I am aware also that metallic members have been used in the construction of the ends of car bodies, but they are functionally dependent upon their combination with other independent parts and do not constitute a functional unit as in my invention.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A metallic end frame for a railroad car, comprising a horizontal bottom member extending across and adapted to bear against the end of the underframe, a metallic plate projecting rearwardly from the said member and adapted to bear against the longitudinal sills of the underframe, a horizontal top member extending across and adapted to bear against the side framing plates, a metallic plate projecting rearwardly from the said top member and adapted to bear against the underside of the side framing plates, upright members connecting the said horizontal members together, and means for fixing the

end frame to the underframe and side framing plates, substantially as described.

2. A metallic end frame for a railroad car, comprising a horizontal bottom member extending across and adapted to bear against the end of the underframe, a metallic plate projecting rearwardly from the said member and adapted to bear against the longitudinal sills of the underframe, a horizontal top member extending across and adapted to bear against the ends of the side framing plates, a metallic plate projecting rearwardly from the said top member and adapted to bear against the underside of the side framing plates, upright members connecting the said horizontal members and metallic plates together, and means for fixing the end frame to the underframe and side framing plates, substantially as described.

3. The combination with a metallic end frame for a railroad car, of a horizontal member projecting rearwardly from and extending entirely across the said frame, and adapted to bear against the underside of the side framing plates of the car, and means for fixing the said member to the said plates, substantially as described.

4. The combination with a metallic end frame for a railroad car, of a horizontal member projecting rearwardly therefrom and adapted to bear against the sills of the car underframe, and a suitable member uniting the said frame and horizontal member together, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY M. PFLAGER.

Witnesses:

H. C. BELLVILLE,
EDWARD W. FURRELL.