

(No Model.)

H. H. SESSIONS.
CAR CONSTRUCTION.

No. 453,403.

Patented June 2, 1891.

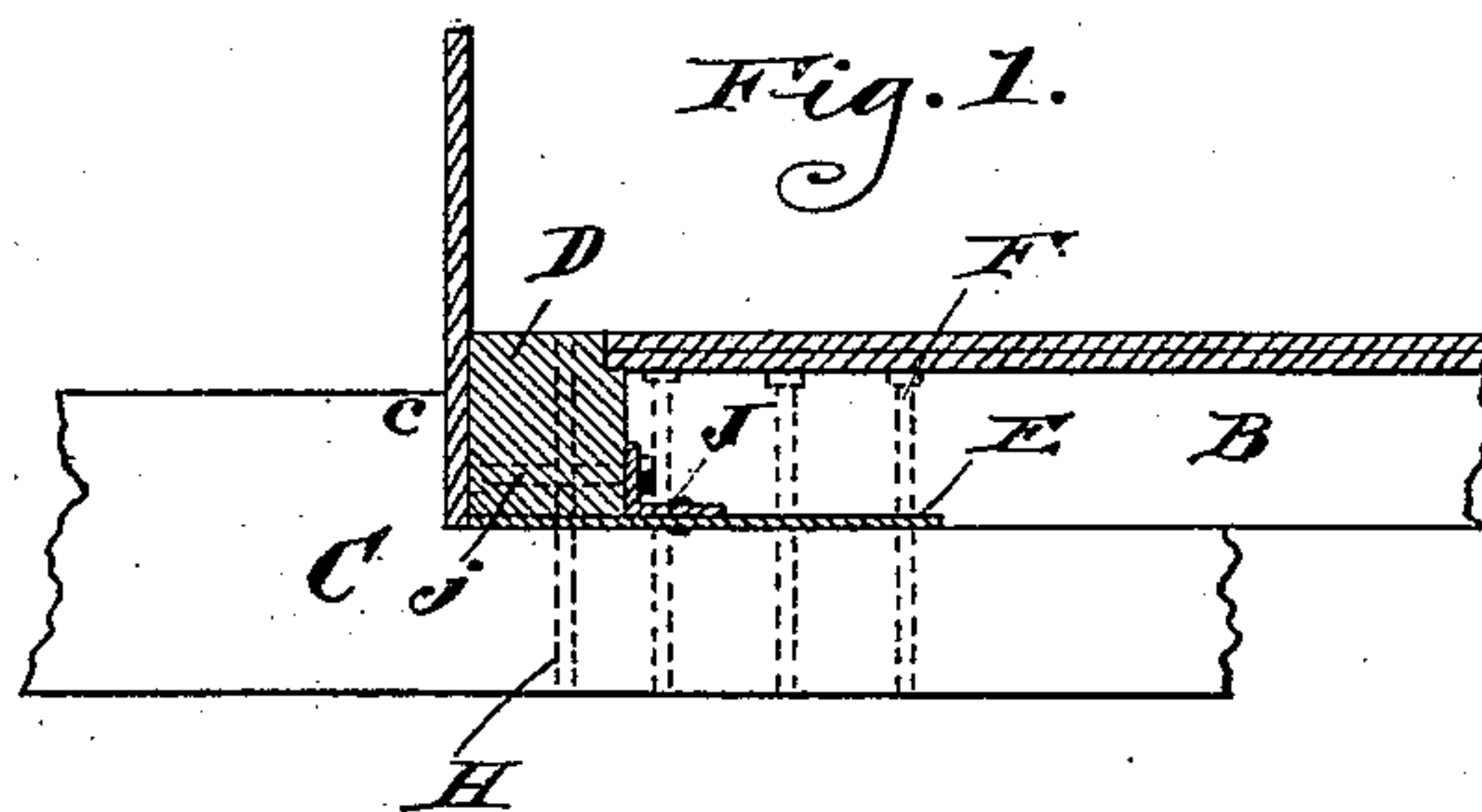


Fig. 2.

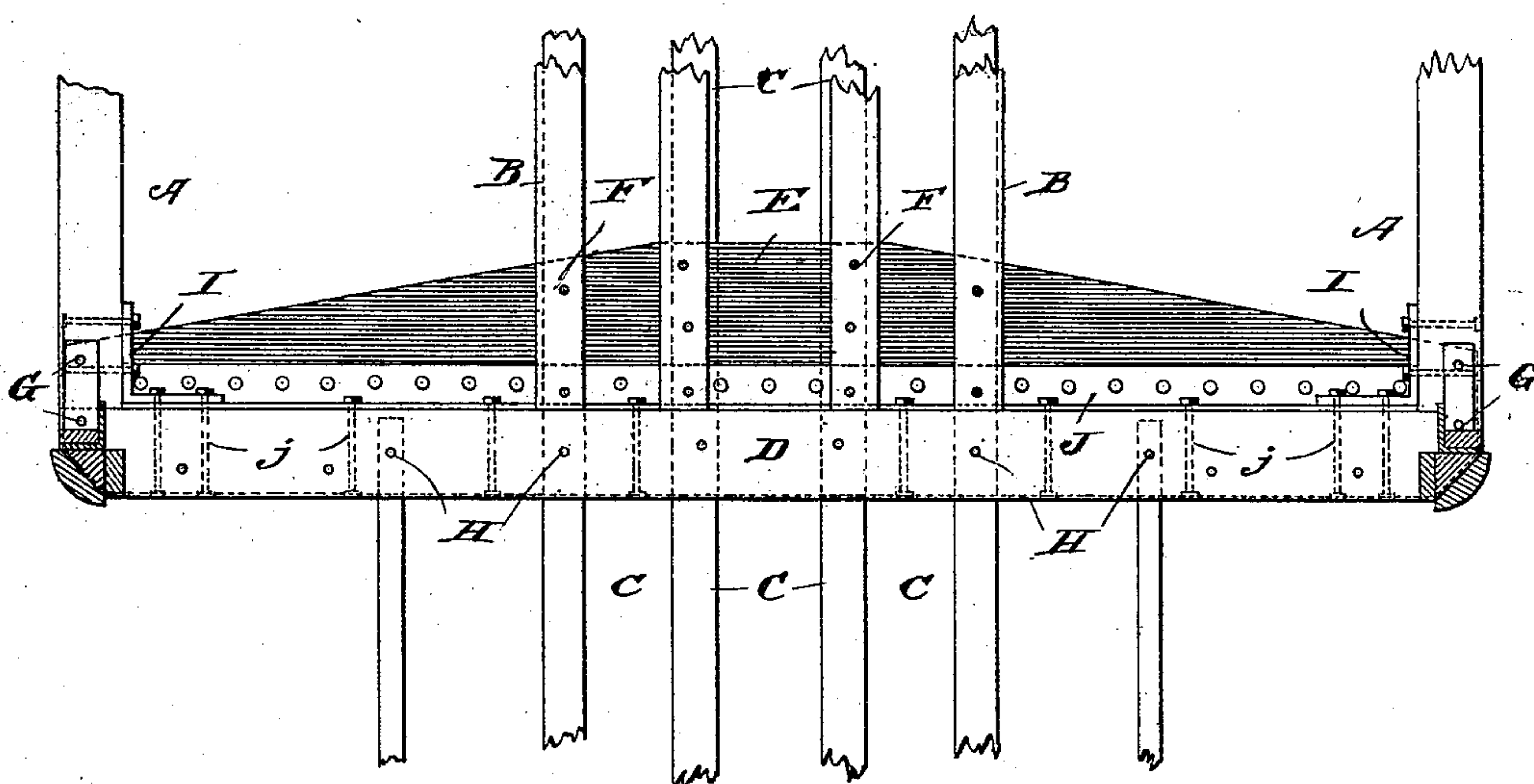
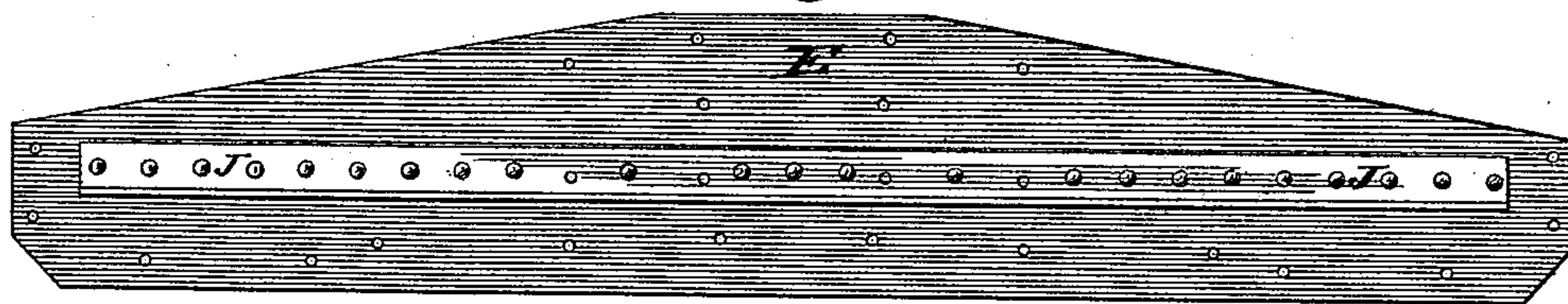


Fig. 3.



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UNITED STATES PATENT OFFICE.

HENRY HOWARD SESSIONS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE PULLMAN'S PALACE CAR COMPANY, OF SAME PLACE.

CAR CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 453,403, dated June 2, 1891.

Application filed November 7, 1890. Serial No. 370,633. (No model.)

To all whom it may concern:

Be it known that I, HENRY HOWARD SESSIONS, of Chicago, Illinois, have invented certain new and useful Improvements in Car Construction, of which the following is a specification.

My invention has for its object to improve the construction of railway-cars, whereby to better adapt them to withstand shock and prevent telescoping in the event of collision. The telescoping of railway-cars when in collision is mainly due to the breaking or fracture of the end sill at or near the vertical plane in which the draw-head is located. When the end sill is broken, the side sills spread, and the end of one car is driven into another, and thus this most dangerous form of accident is the cause of great destruction to life and property. To obviate this danger is the main object of my invention; and to this end my invention consists in anchoring or tying together the side sills of the car at their ends by means of a metal plate so placed as to present its edge at an angle to the plane in which the shock of collision moves. This plate I preferably make of considerable breadth and locate it between the platform-timbers and the interior body-sills, whereby the plate is securely clamped in its middle portions, and thereby prevented from buckling or bending under shock. An incidental feature of utility in the use of this end plate is that it materially strengthens the end sill of the car, so that the ordinary shocks of buffing and pulling in service are divided between the end sill and said plate, and the former is not so apt to be fractured, but the prevention of telescoping is of course of greater importance.

In the accompanying drawings, Figure 1 is a side elevation of portions of the platform-timbers and body-sills, the end sill, floor, and strengthening-plate shown in section. Fig. 2 is a plan view of the end sill and plate and showing portions of the sills and platform-timbers; and Fig. 3 is a plan view of the plate, showing an angular flange secured thereto and adapted to furnish a stop or abutment for the end sill and platform-timbers.

In the drawings, A represents the side sills;

B, the intermediate sills; C, the platform-timbers, and D the end sills. The platform-timbers usually have a shoulder, such as shown at *c*, which abuts against the front side of the end sill, and an extension which projects beneath the end sill and also beneath the intermediate sills.

E shows the strengthening-plate of my invention, which in the preferred form is wider at its middle than at its ends, and which is placed flatwise upon top of the platform-timbers and beneath the end sill and receives the front ends of the main sills. Bolts F pass through the main sills, plate, and platform-timbers, and bolts G pass through the ends of the side sills and through the ends of the plate. The end sill is also bolted through the plate and platform-timbers, as shown at H, and to further strengthen the construction I bolt knee-braces I to the end sills and side sills, as clearly shown in Fig. 2.

J is an angle-bar, which is riveted to the plate E, and a projecting flange thereof receives the ends of the intermediate sills and abuts against the rear side of the end sill, to which it is secured by the bolts *j*. This flange may be integral with the plate, and the form of the latter may be changed to suit the requirements of construction.

It will be seen from the above description that the plate firmly anchors the body-sills and platform-timbers securely together, while at the same time it greatly strengthens the end sill.

I have described my invention as applied to passenger-cars in which platform-timbers are employed; but when applied to freight-cars which have no platform-timbers the plates will be secured between the usual sub-sills or draft-timbers and the end sill and main sills.

It is obvious that this strengthening-plate may be used in combination with re-enforcing plates for the posts or uprights at the end of the car, and I have described this combination in my application, Serial No. 326,625, filed in the United States Patent Office October 10, 1890, and which is still pending.

I claim—

1. In car construction, the combination, with the main sills, end sill, and platform or

draft timbers, of a metal plate located between the main sills and the platform or draft timbers and beneath the end sill and having its ends secured with the outer main sills, 5 substantially as described.

2. In car construction, the combination, with the main sills, end sill, and platform or draft timbers, of a metal strengthening-plate placed flatwise between the platform-timbers 10 and main sills and having its ends secured to the outside main sills and supporting the intermediate main sills and secured also to the platform-timbers and end sill, substantially as described.

3. In car construction, the combination, 15 with the main sills, end sill, and platform or draft timbers, of a metal strengthening-plate disposed flatwise beneath the end sill and between the main sills and platform or draft timbers and having a flange adapted to bear 20 against the rear side of the end sill to form an abutment for the ends of the intermediate main sills, substantially as described.

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