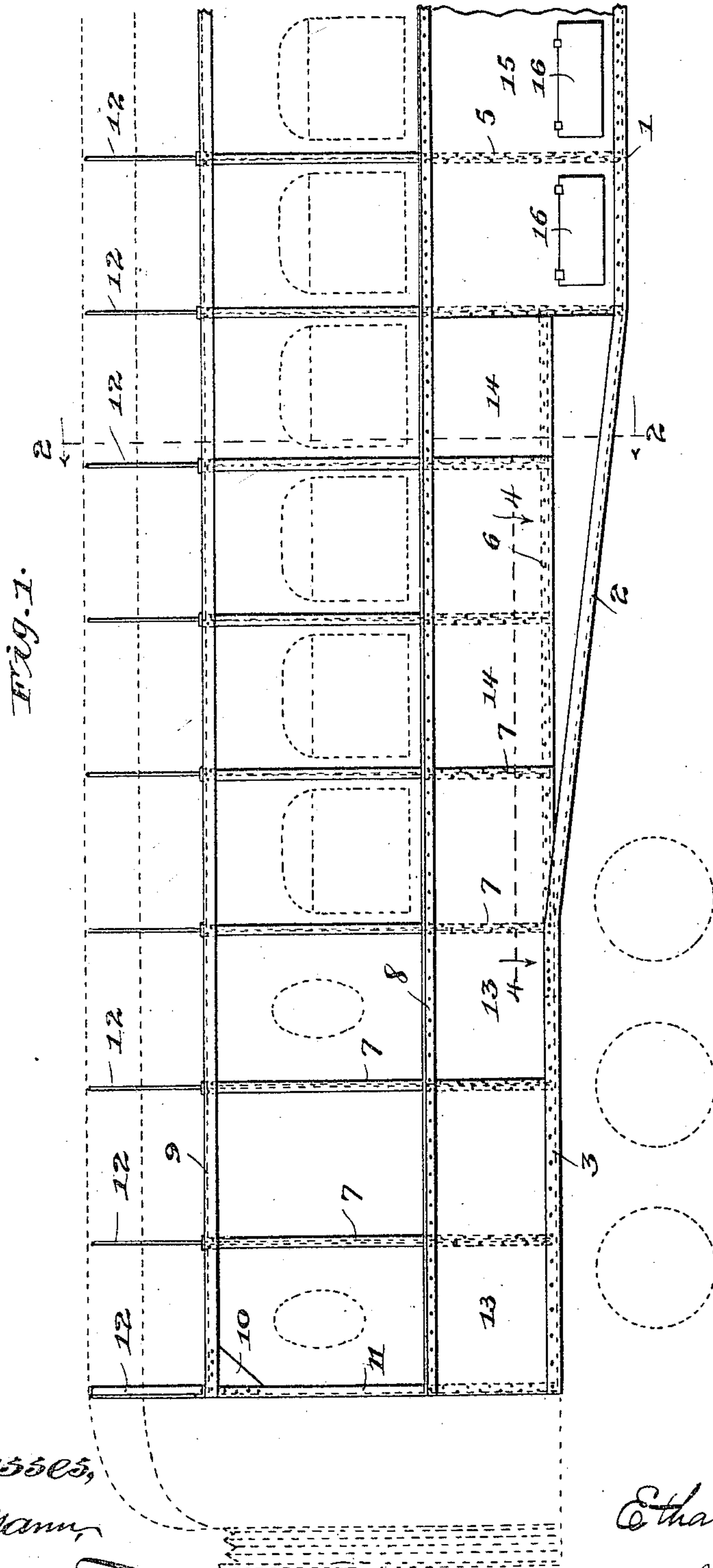


No. 831,650

PATENTED SEPT. 25, 1906.

E. I. DODDS.
SIDE CONSTRUCTION FOR CARS.
APPLICATION FILED JULY 24, 1905.

3 SHEETS—SHEET 1.



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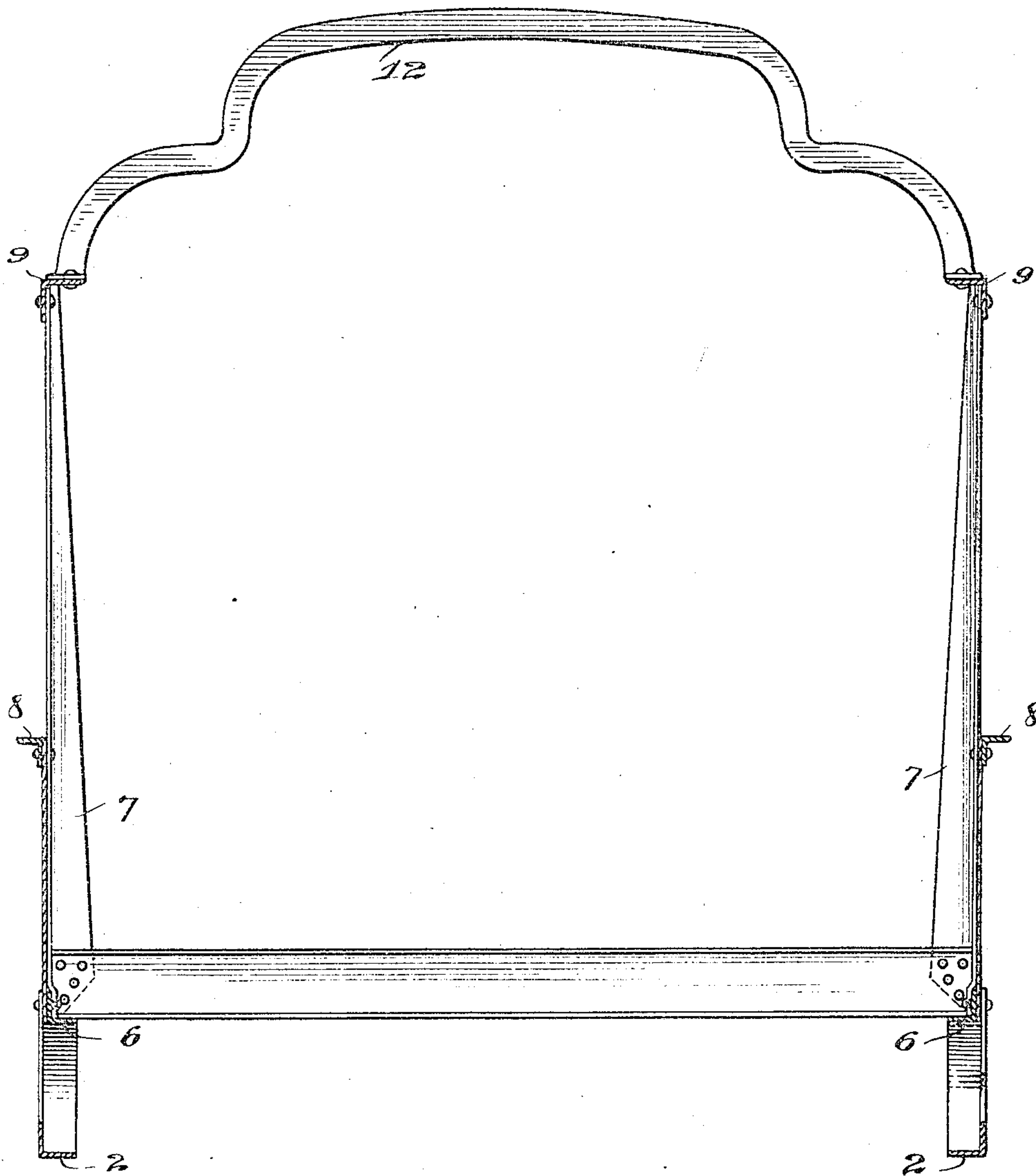
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

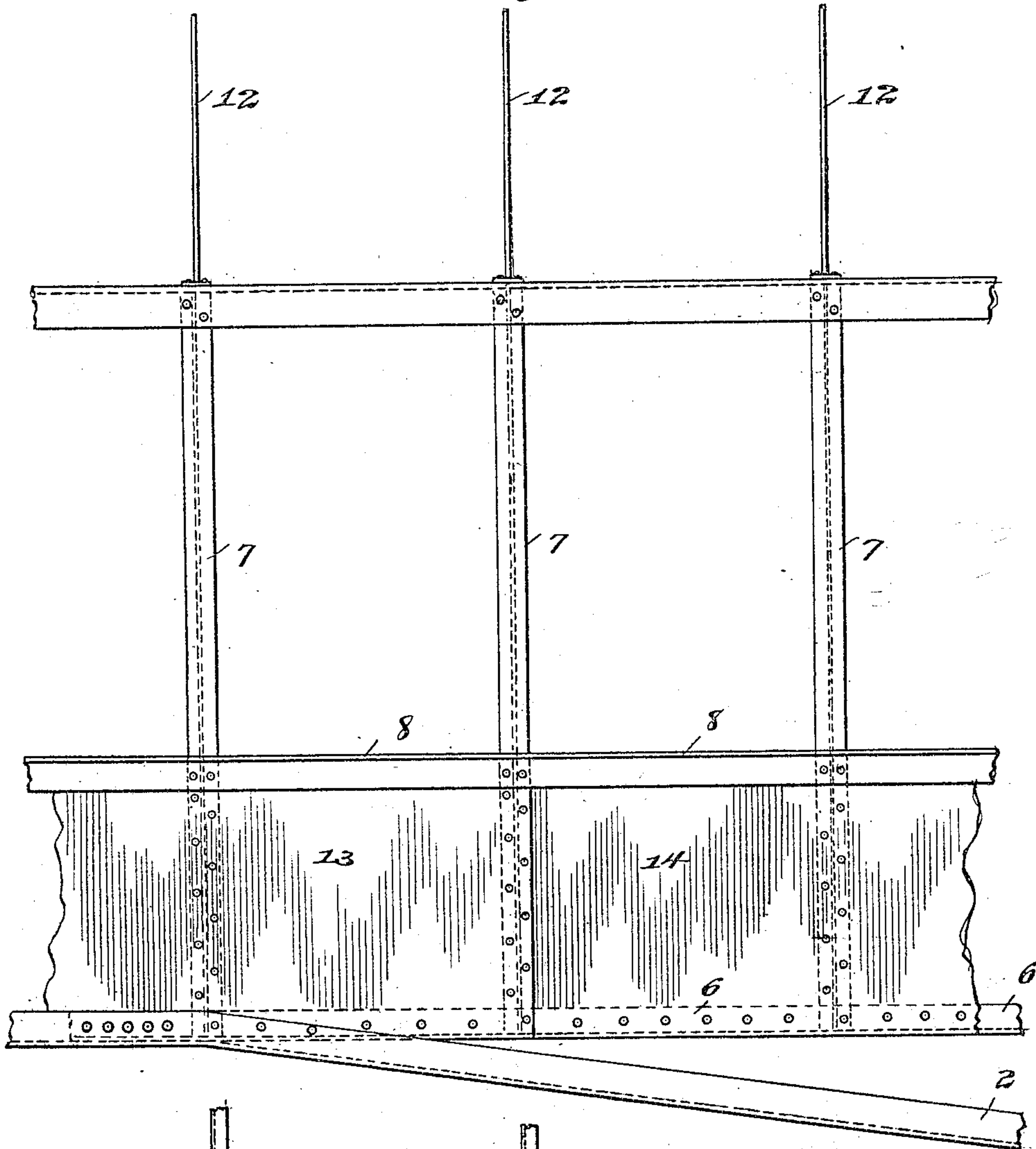
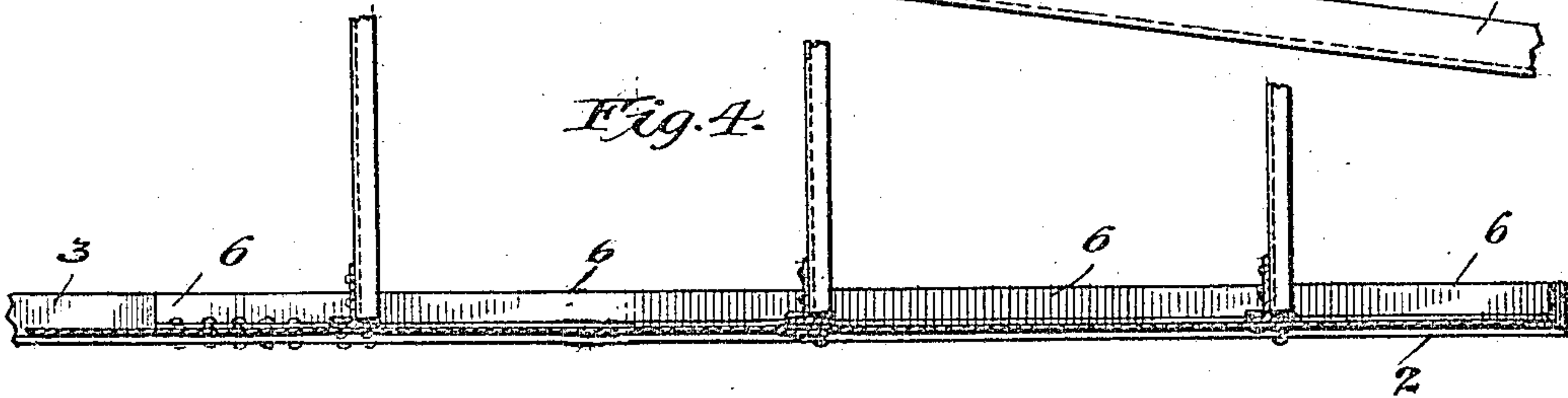


Fig. 4.



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UNITED STATES PATENT OFFICE.

ETHAN I. DODDS, OF PULLMAN, ILLINOIS, ASSIGNOR TO THE PULLMAN COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SIDE CONSTRUCTION FOR CARS.

No. 831,650.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed July 24, 1905. Serial No. 270,999.

To all whom it may concern:

Be it known that I, ETHAN I. DODDS, a citizen of the United States, residing at Pullman, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Side Constructions for Cars, of which the following is a specification.

My invention relates to cars, and is more especially directed to improvements in the construction of such vehicles with deep-plate girder sides. The parts embodying my invention are comparatively light in weight, yet they have a large carrying capacity combined with strength.

Another object of my invention is the employment of doors or openings in a portion of the plates constituting the girders.

All of my improvements are especially valuable when used in connection with passenger or baggage cars, although they are in no wise restricted to such use.

On the accompanying drawings I have illustrated one embodiment of my invention, wherein—

Figure 1 is a side elevation of one-half of a car constructed according to my invention. Fig. 2 is a vertical cross-section of the car on the line 2 2. Fig. 3 is an enlarged side elevation of a portion of the car. Fig. 4 is a horizontal section on the line 4 4 of Fig. 1.

The lower tension angle-bar of the side comprises an intermediate horizontal portion 1, inclined portions 2, and end horizontal portions 3, it being understood that the drawings illustrated but one longitudinal half of the side of the car. The side stakes 4 and 5, which are T-shaped in cross-section with their outstanding flanges tapering toward the top, are connected to the central horizontal portion of the lower tension angle-bar and extend upwardly, being riveted also to the upper compression angle-bar 9 and to the intermediate compression angle-bar 8, the former having its upper flange extending inwardly and that of the latter projecting outwardly. Connecting each horizontal portion 3 of the tension angle-bar with the side stakes 4 are angle-bar stiffeners 6. The horizontal portions 3 of the lower tension-bar and the above-mentioned stiffeners 6 are connected to the upper and to the intermediate compression-bars 9 and 8 by the side stakes 7, which are riveted to the flanges of the various parts, these side stakes being also T-shaped in cross-

section. Angle-bars 11 are provided at the corners of the car and at their upper portions are connected to the compression-bar 9 and to a gusset-plate 10. Extending upwardly from the bar 9 are the carlines 12. Overlapping plates 13 and 14 connect the intermediate compression-bar 8 with the portion 3 of the lower tension-bar and with the stiffener 6, respectively, being also riveted to the flanges of the side stakes and to the bars 3, 6, and 8, leaving a space between the stiffener 6 and the inclined portion 2 of the tension-bar. By this construction I am enabled to use plates of standard size without cutting and at the same time to reduce the weight of the car. Plates 15 extend the whole distance from the intermediate compression-bar 8 to the depressed horizontal portion 1 of the tension-bar, said plates being fastened to the tension and compression bar and also to the flanges of the side stakes. These central plates 15 may be provided with openings having doors 16, so as to admit of ready access to any box or compartments which may be placed beneath the car-floor. The other half of the side of the car is a duplicate of the structure shown and described, and owing to this fact its illustration is unnecessary. The woodwork of the car is secured to the iron frame in any improved manner, a portion of it being illustrated in dotted lines

It is obvious that various changes may be made in the details of this construction without departing from the scope of this invention as defined by the appended claims.

This patent is intended to embrace only so much of the disclosure made herein as is covered by the claims.

I claim—

1. In a side construction for a car, the combination of a tension-bar extending substantially the full length of the car, and having horizontal and inclined portions, an upright bar secured to said tension-bar, and a stiffener fastened to a horizontal portion of said tension-bar and to said upright bar, substantially as described.

2. In a side construction for a car, the combination of a tension-bar extending substantially the full length of the car, and having horizontal and inclined portions, an upright bar secured to said tension-bar, and a stiffener, above an inclined portion of said tension-bar, fastened to a horizontal portion

thereof, and to said upright bar, substantially as described.

3. In a side construction for a car, the combination of a tension-bar having horizontal and inclined portions, an upper compression-bar, side stakes connecting the upper compression-bar and the horizontal portions of the tension-bar, a stiffener connecting a horizontal portion of the tension-bar to one of the side stakes, and additional side stakes connecting the upper compression-bar and stiffener.

4. In a side construction for a car, the combination of a tension-bar extending substantially the full length of the car, and having horizontal and inclined portions, a compression-bar, side stakes connecting the horizontal portions of the tension-bar to the compression-bar, a stiffener fastened to a horizontal portion of the tension-bar and to one of the side stakes, additional stakes secured to the compression-bar and to the stiffener, and plates extending from the compression-bar to the horizontal portions of the tension-bar and to the stiffener and connected thereto, substantially as described.

5. In a side construction for a car, the com-

bination of a tension-bar having horizontal and inclined portions, an upper compression-bar, an intermediate compression-bar, side stakes connecting the horizontal portions of the tension-bar to the compression-bars, a stiffener fastened to a horizontal portion of the tension-bar and to one of the side stakes, additional stakes connecting the compression-bars and the stiffener, and plates connecting the intermediate compression-bar to the horizontal portions of the tension-bar and to the stiffener, substantially as described.

6. In a side construction for a car, the combination of a tension-bar having horizontal and inclined portions, an upper compression-bar, an intermediate compression-bar, side stakes connecting the horizontal portions of the tension-bar to the compression-bars, a stiffener secured to a horizontal portion of the tension-bar and to a side stake, and additional side stakes connecting the compression-bars and the stiffener, substantially as described.

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Witnesses:

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