

No. 803,330.

PATENTED OCT. 31, 1905.

E. I. DODDS.
CAR FRAME.

APPLICATION FILED JAN. 29, 1904.

Fig. 1.

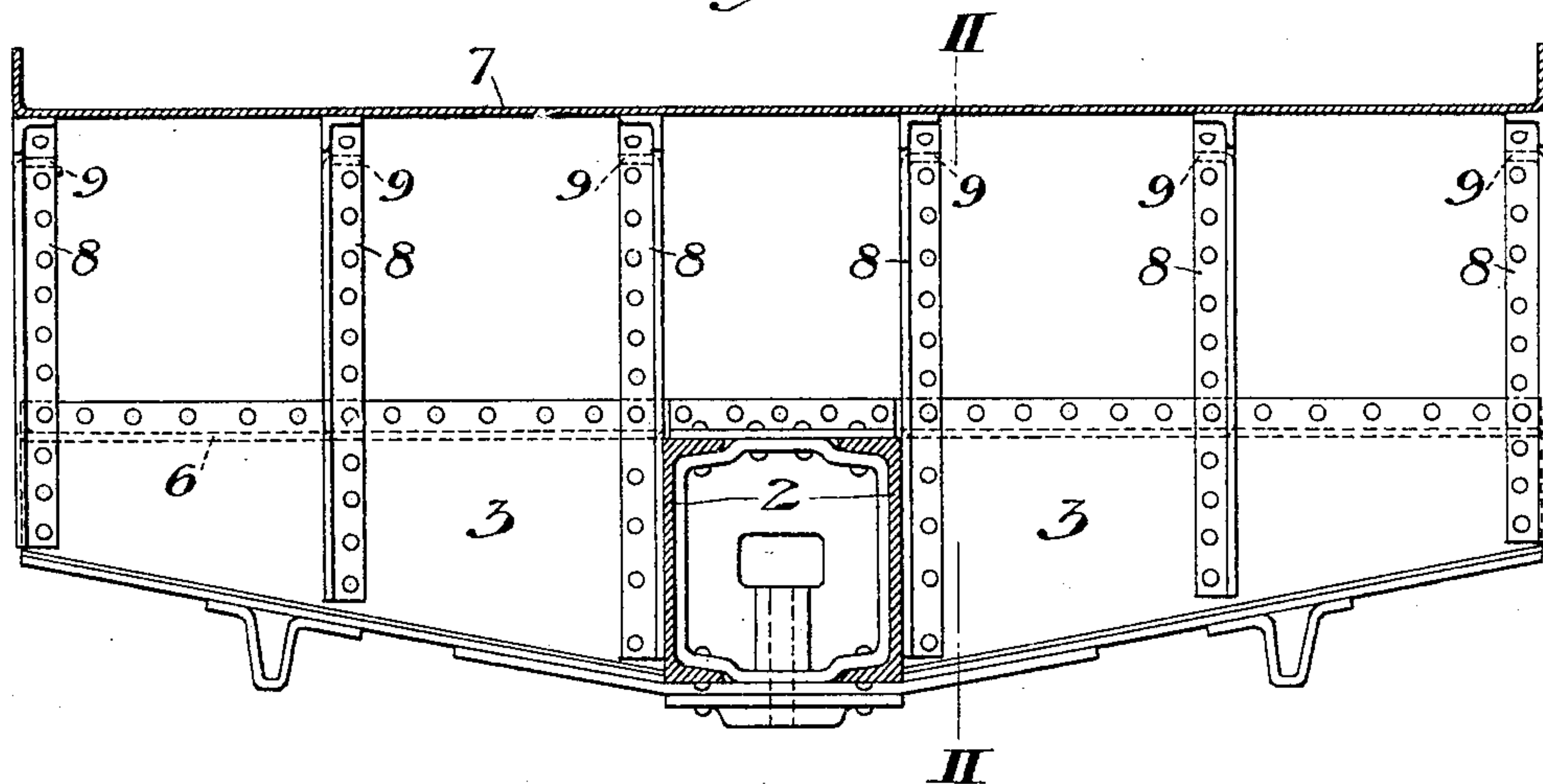


Fig. 2.

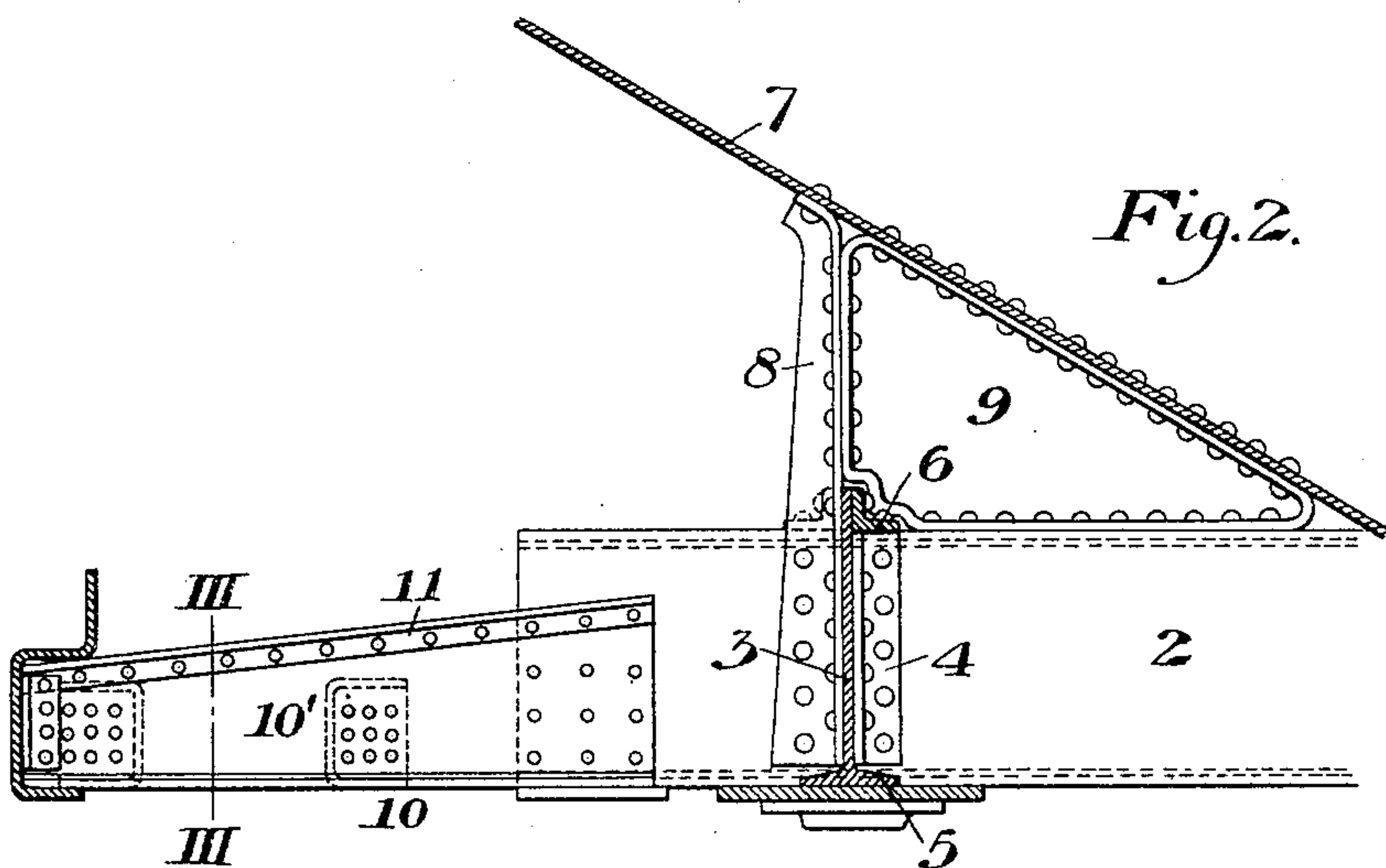
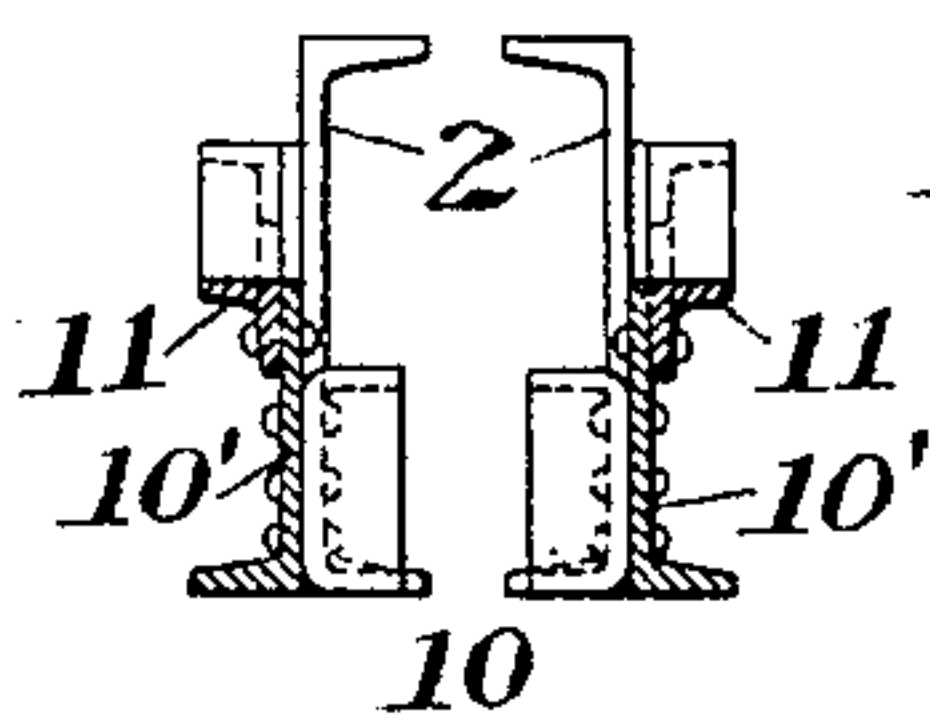


Fig. 3.



WITNESSES

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ETHAN I. DODDS, OF AVALON, PENNSYLVANIA, ASSIGNOR TO PRESSED STEEL CAR COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

CAR-FRAME.

No. 803,330.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed January 29, 1904. Serial No. 191,116.

To all whom it may concern:

Be it known that I, ETHAN I. DODDS, of Avalon, Allegheny county, Pennsylvania, have invented a new and useful Car-Frame, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows in vertical cross-section through the center sill of a car a car-frame constructed in accordance with my invention. Fig. 2 is a vertical section on the line II II of Fig. 1. Fig. 3 is a cross-section on the line III III of Fig. 2.

The purpose of my invention is to provide a strong body-bolster and a strong support between the body-bolster and the floor of the car which holds the body-bolster in place and renders the entire construction resistant to the strains which are put upon it in use.

In the drawings, 2 is the center sill of a car, which is preferably made of channel-beams, as shown in Fig. 1, but may be of other suitable construction. 3 3 are the members of the body-bolster, which extend across the car and are abutted at the inner ends against the sides of the center sill, being secured thereto preferably by connecting-angles 4. This bolster is composed of a flanged beam, the lower flanges 5 of which are integral, as in an I-beam, but the upper edge is unflanged. This construction may be obtained by shearing an I-beam section with a longitudinal cut through its web.

Along the upper edge of the bolster is a tension member composed of an angle-bar 6, which is riveted to the bolster and extends from end to end thereof, as shown in Fig. 1. A Z-bar or other flanged shape may be substituted for the angle-bar. The top edges of the bolster and the tension member 6 thereon extend above the plane of the center sill, and a tie-plate 5' connects the inner ends of the bolster members beneath the center sill.

The bolster is connected with the floor of the car by struts 8, which are angled in cross-sections and are preferably wider at the lower than at the upper end. They are best formed by dividing a channel-beam with a bias cut extending longitudinally through its web; but the strut member may be otherwise formed from a plate or from flanged pieces of other sections. These struts are riveted at

the lower end to the center sill and to the web of the bolster and at the upper end are fixed to the car-floor, and, preferably, also to diaphragms 9, interposed between the struts and the floor. These diaphragms preferably occupy the entire space between the car-floor, strut, and center sill and are riveted to each of these members.

10 is a draft-sill, which extends forwardly from the center sill and, as shown in Fig. 3, is preferably composed of parallel flanged beams 10' 10', having integral flanges at their lower edges and strengthened at their upper edges by attached angles 11. The parts of the draft-sill may best be formed by shearing an I-beam or channel-beam longitudinally through its web with a bias cut.

The construction of body-bolster and strut above described has many advantages which will be appreciated by those skilled in the art. It enables me to make the parts with the least possible waste of material and to obtain a maximum of rigidity and strength in the connection between the bolster and car-floor and in the bolster itself.

Within the scope of my invention as defined in the claims a skilled mechanic can modify the construction in various ways, since

What I claim is—

1. In combination with a bolster a strut member extending across the bolster and thence to the car-floor, and a tension member applied to the upper edge of the bolster; substantially as described.

2. In combination with a bolster, a strut member fixed to the web of the bolster and extending upwardly therefrom; substantially as described.

3. In combination with a bolster flanged at its lower edge and unflanged at its upper edge, a strut member extending upwardly across the bolster, and an angled tension member applied to the upper edge of the bolster; substantially as described.

4. In combination with a bolster, a strut member extending across the bolster and thence to the car-floor, a tension member applied to the upper edge of the bolster, and a center sill, said bolster and the tension member thereon extending above the level of the center sill; substantially as described.

5. In combination with a bolster, a strut member extending from the bolster to the car-

floor, and a tension member applied to the upper edge of the bolster, said strut member consisting of a flanged piece wider at the lower portion than above; substantially as described.
5

6. In combination with a bolster and center sill, a strut member extending upwardly from the bolster to the car-floor, and a diaphragm

substantially filling the space between these parts; substantially as described. 10

In testimony whereof I have hereunto set my hand.

ETHAN I. DODDS.

Witnesses:

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LAURA KLEINFELDER.