

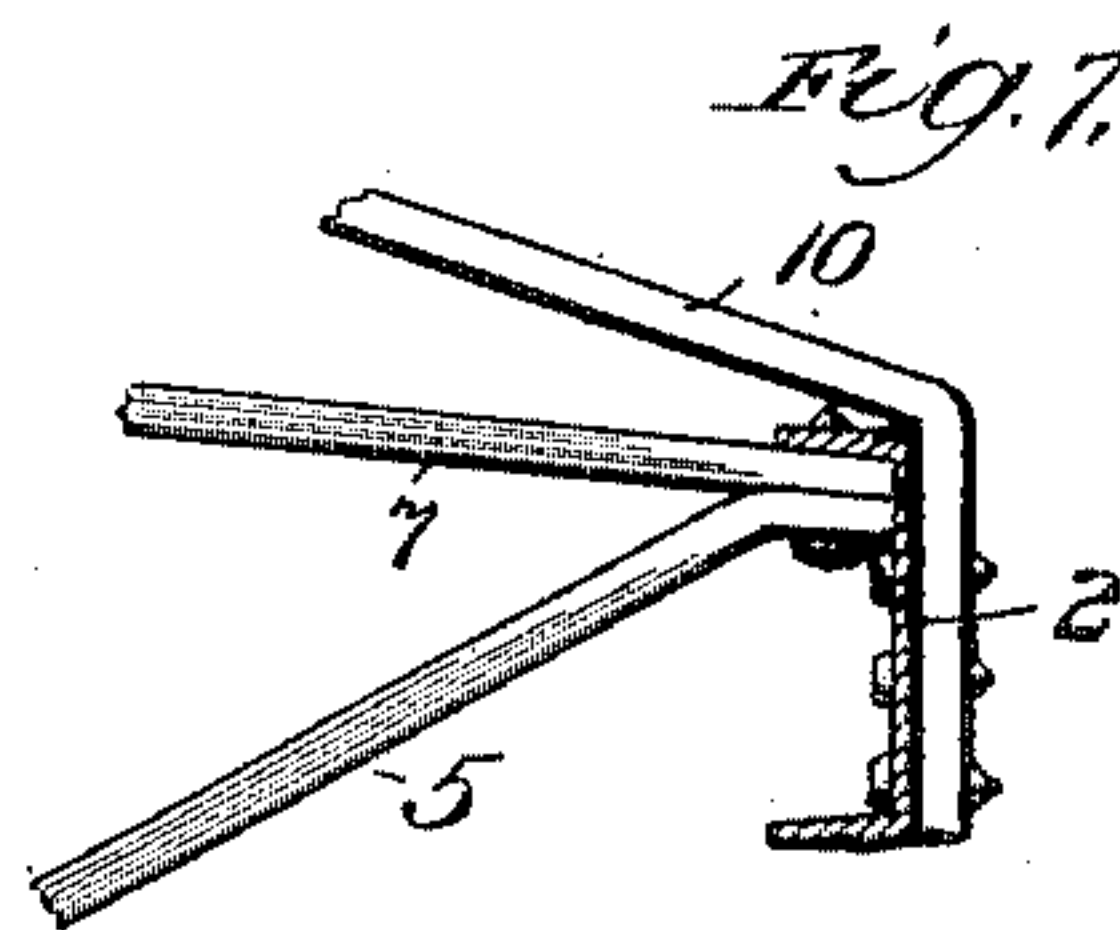
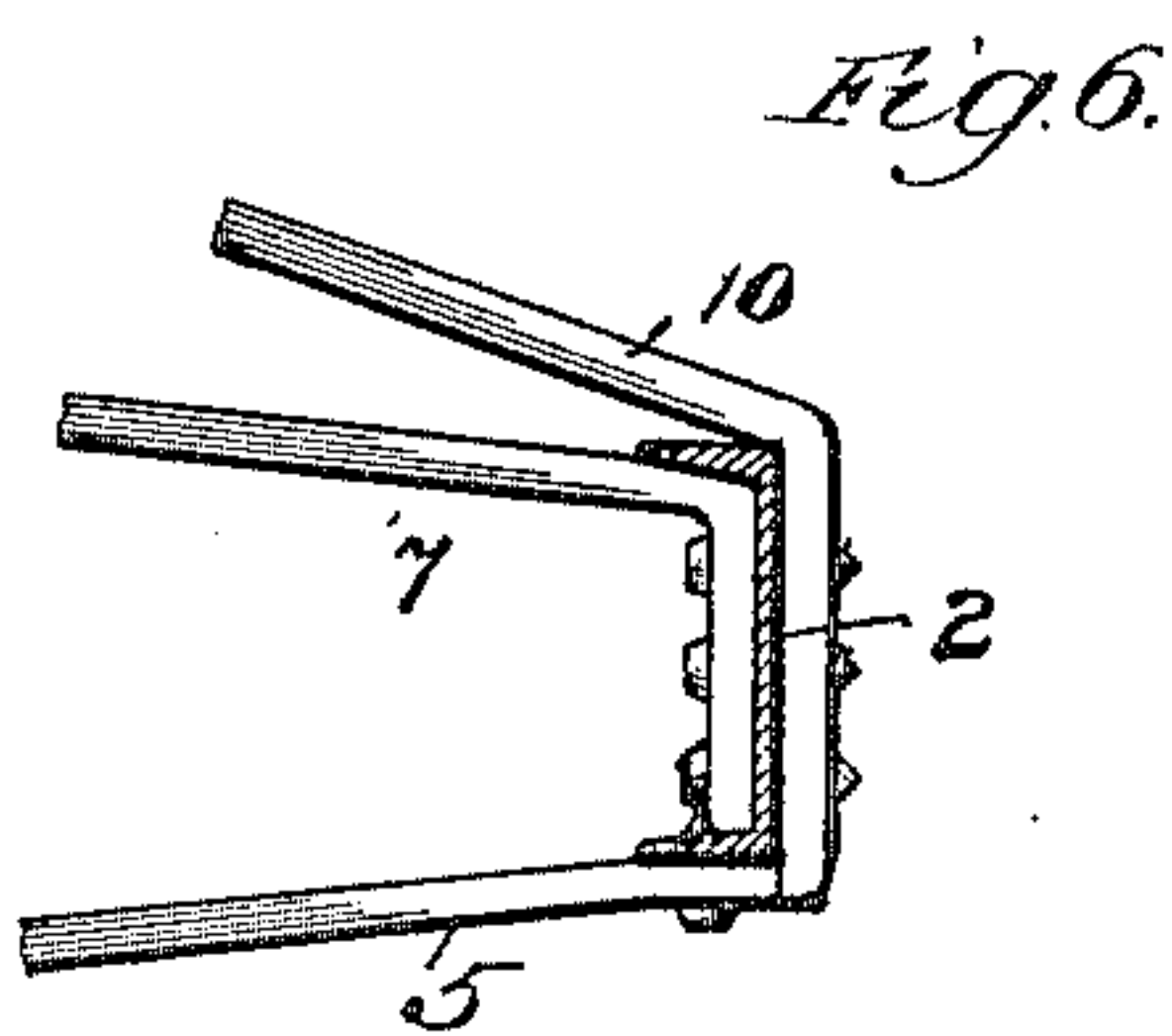
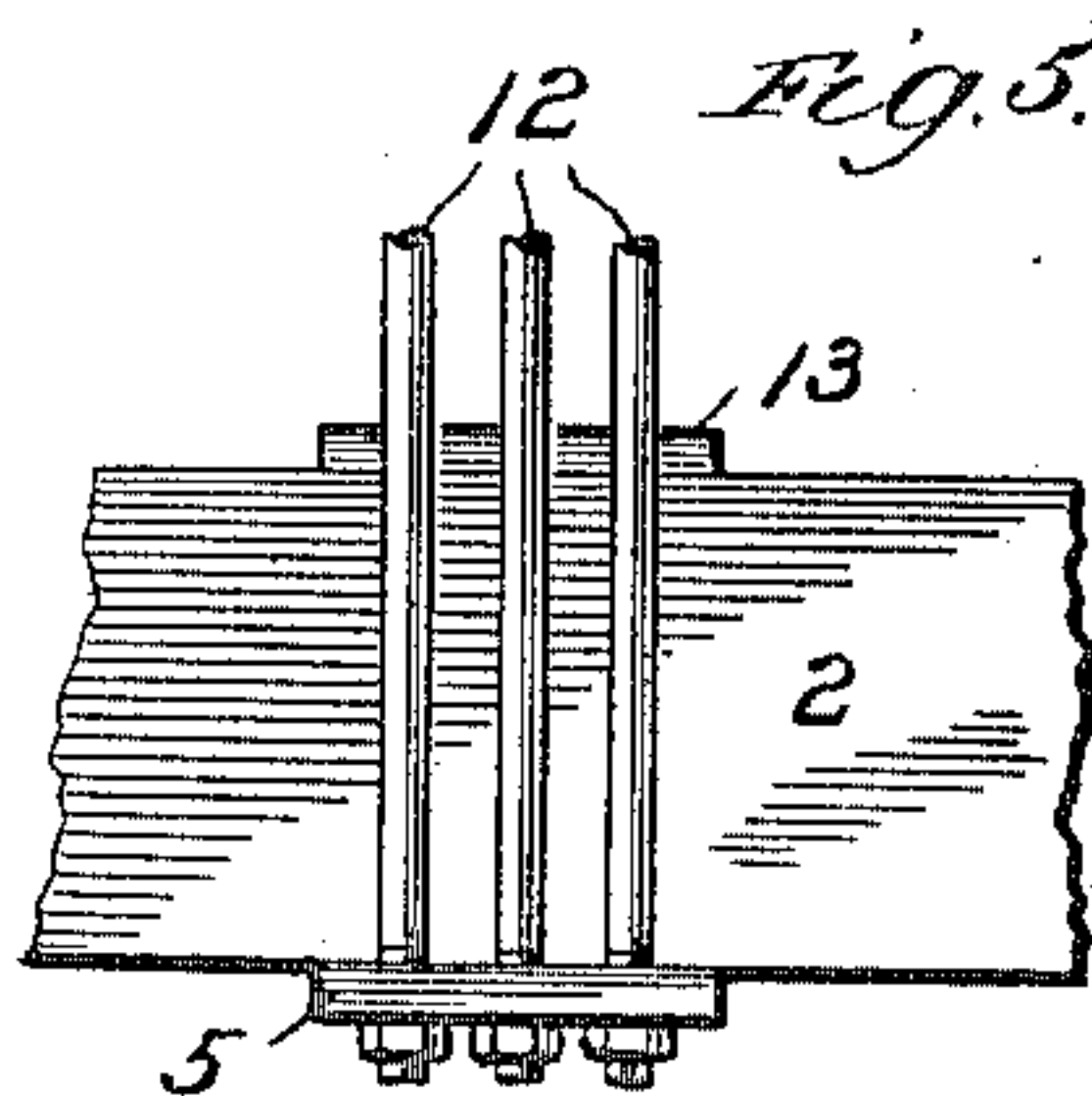
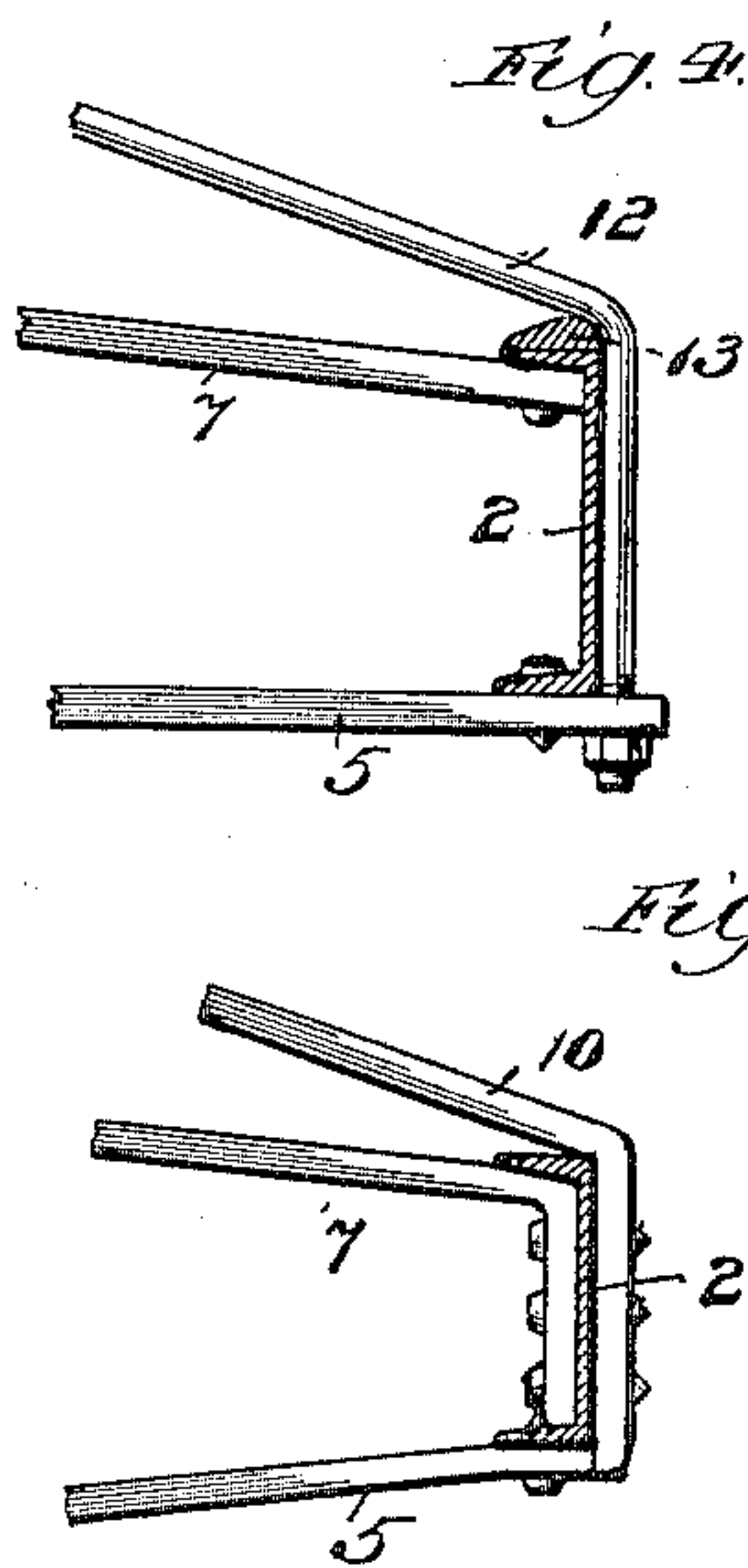
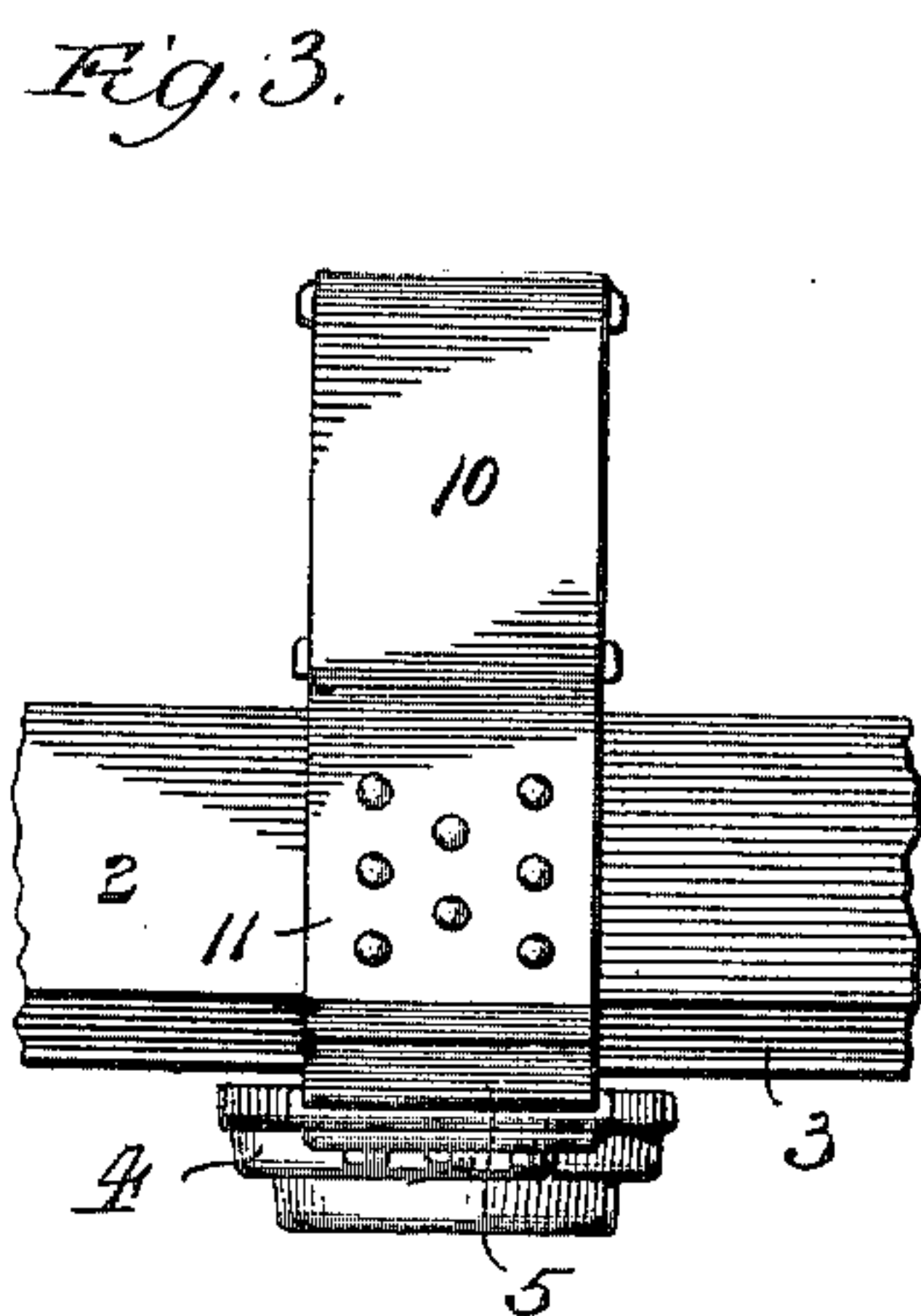
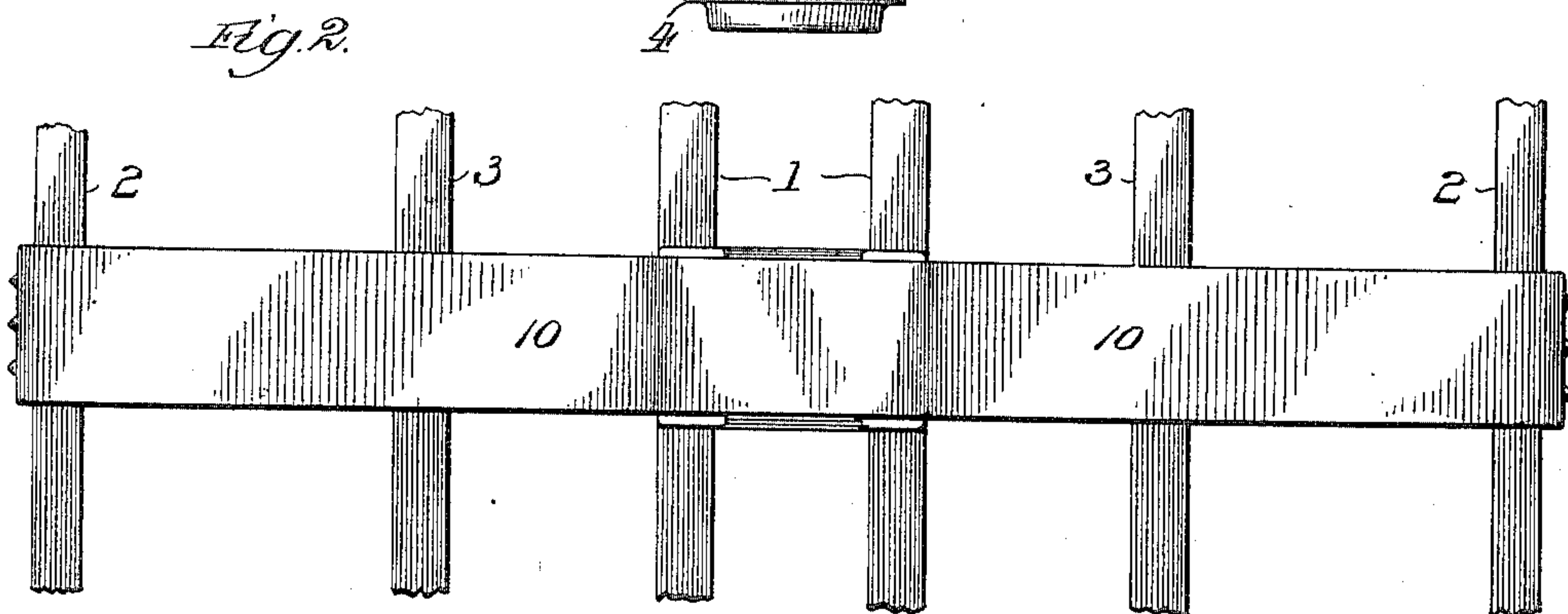
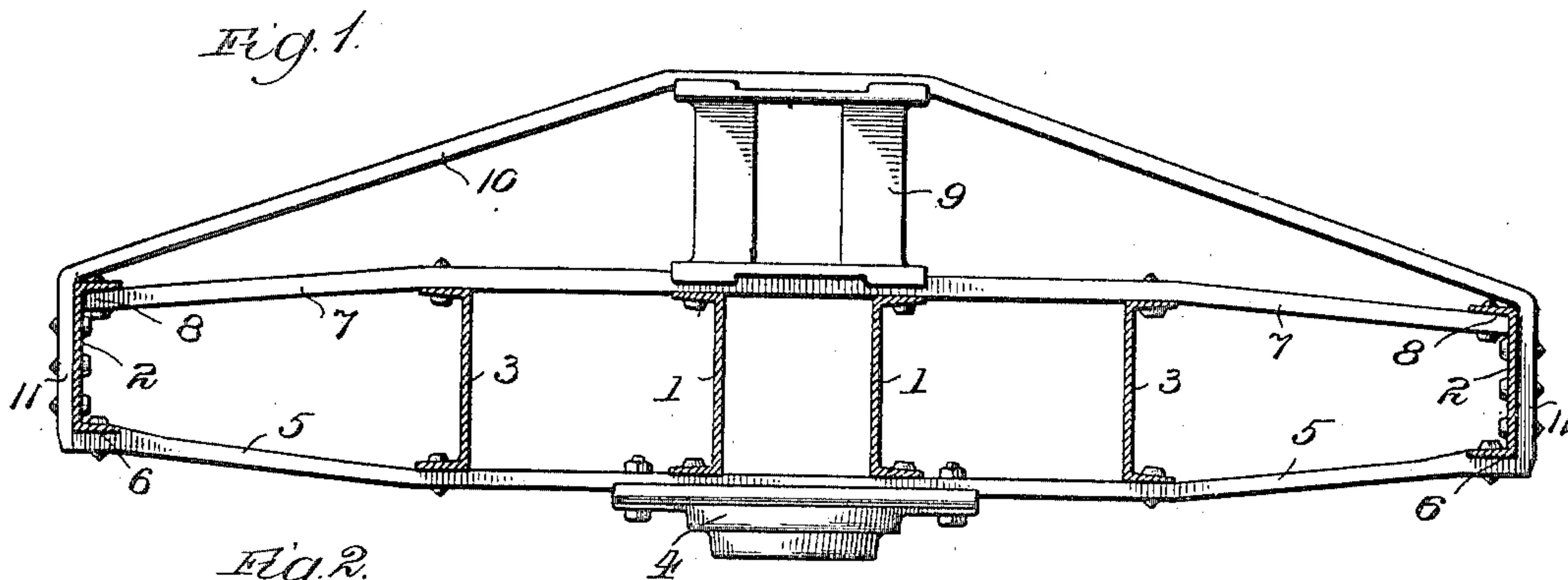
No. 660,081.

Patented Oct. 16, 1900.

H. S. BRYAN.
CAR CONSTRUCTION.

(Application filed Feb. 15, 1900.)

(No Model.)



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY S. BRYAN, OF TWO HARBORS, MINNESOTA.

CAR CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 660,081, dated October 16, 1900.

Application filed February 15, 1900. Serial No. 5,272. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. BRYAN, a citizen of the United States, residing in Two Harbors, Lake county, Minnesota, have invented a certain new and useful Improvement in Car Construction, of which the following, taken in connection with the accompanying drawings, is a specification.

The first of the objects of my invention is the provision of a construction of car-frame in which the frame members are combined with transverse members, forming together a kind of bolster and designed to take the place thereof on all cars to which such structure is applicable, being particularly adaptable to cars known as "hopper-bottom" gondolas, the structure of which, by reason of the inclination of that part of the hopper-bottom above the main sills of the car, leaves sufficient room for a bolster of my improved design.

A further object of my invention is the provision of a car construction comprising the combination, with the sills thereof, of members united with the said sills in a manner to form together therewith a strong and simple bolster, which at the same time will not be expensive to construct nor add materially to the weight of the other parts of the car.

Another object of my invention is the provision of a bolster-truss for cars which shall comprise three principal members, of which the bottom and intermediate members form a compound compression member, of which the top member forms the tension member, while at the same time the intermediate member acts to some extent as a tension member for the bottom member.

The above, as well as such other objects as may hereinafter appear, I attain by means of a construction which I have illustrated in preferred form in the accompanying drawings, in which—

Figure 1 is a sectional elevation showing my improved car construction. Fig. 2 is a plan view thereof; Fig. 3, an end view; Fig. 4, a modification showing the use of rods as the top member; Fig. 5, an end view of such modification; Fig. 6, a view showing a modification in detail of the method of attaching the ends of the several members; and Fig. 7, another modification in detail, having par-

ticular reference to the point of attachment of the lower compression member.

The center sills of a car I have represented at 1, the side sills at 2, and the intermediate sills at 3, the said sills being arranged to form spacing members between the lower and intermediate members of the bolster. Across the bottom of these several sills, above the center-plate 4, I arrange a bottom compression member 5, secured to the center and intermediate sills in some suitable manner, as by the rivets shown, and provided at its ends with a seat engaging the lower flange of the side sill at 6. Across the upper flanges of the center and intermediate sills I arrange an intermediate member 7, preferably fastened to the side sills within the upper flange, as shown at 8. Above the intermediate member 7 I provide a compression block or strut 9, over which is stretched an upper tension member 10, the ends of which are securely attached to the side sills, as shown at 11.

In Figs. 4 and 5 I have shown a plurality of rods 12 substituted for the tension member 10, the said rods being bent around the filling-piece 13 and down adjacent to the side sill 2 and engaging the projecting end of the lower compression member 5 in the manner shown in the drawings.

In Fig. 6 I have shown the intermediate member 7 bent downward inside the side sills 2, so that it may be secured by the same rivets that secure the member 10.

In Fig. 7 the compression member 5 has its ends bent up to meet the ends of the intermediate member 7, both being secured on the under side of the upper flange of the side sill 2 in the manner shown in the drawings.

From the above description it will be obvious that my invention could be modified in various details without departing from the spirit thereof, and I desire to be understood as including all such immaterial modifications as clearly within the scope of my claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A bolster-truss for cars comprising the combination of bottom, top, and intermediate members, having car-sills between the intermediate and bottom members, and a compression member 100

sion-block between the intermediate and top members, substantially as described.

2. A bolster-truss for cars comprising the combination of bottom, top, and intermediate members, having intermediate sills between the intermediate and bottom members, and a compression-block between the intermediate and top members, said several members being connected at their ends to the car side sills, substantially as described.

3. A bolster-truss for cars, comprising the combination of compression and tension members united at their extremities to the car side sills and spaced apart intermediate their ends by intermediate car-sills, and a compression-block, substantially as described.

4. A car structure having a center bearing-bolster provided with a compression member,

a tension member, a third member intermediate said compression and tension members and connections for said several members whereby said intermediate member forms a tension member for said compression member, and a compression member for said tension member, substantially as described.

5. A construction of car-frame comprising car-sills, a compression member below said sills, a tension member above said sills spaced apart therefrom near its middle by a compression-block, and an intermediate member between said compression and tension members, substantially as described.

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