

W. P. MURPHY.

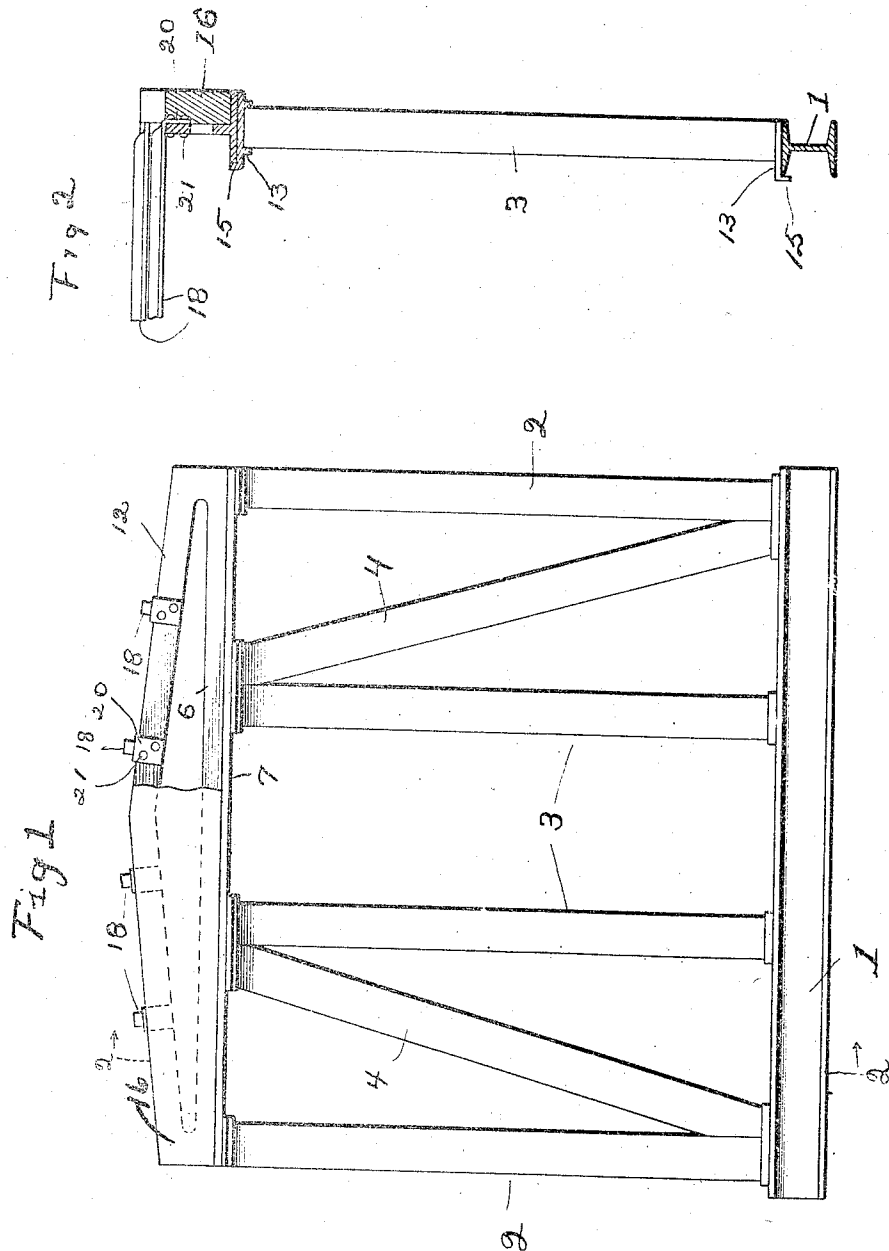
CAR.

APPLICATION FILED AUG. 10, 1910.

983,302.

Patented Feb. 7, 1911.

2 SHEETS—SHEET 1.



WITNESSES

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INVENTOR

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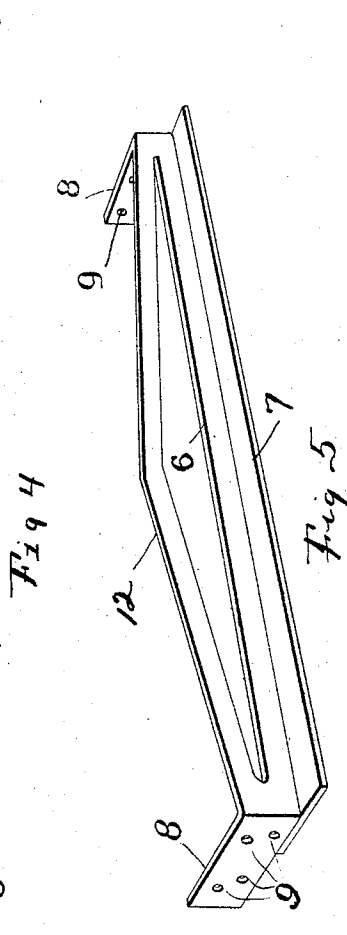
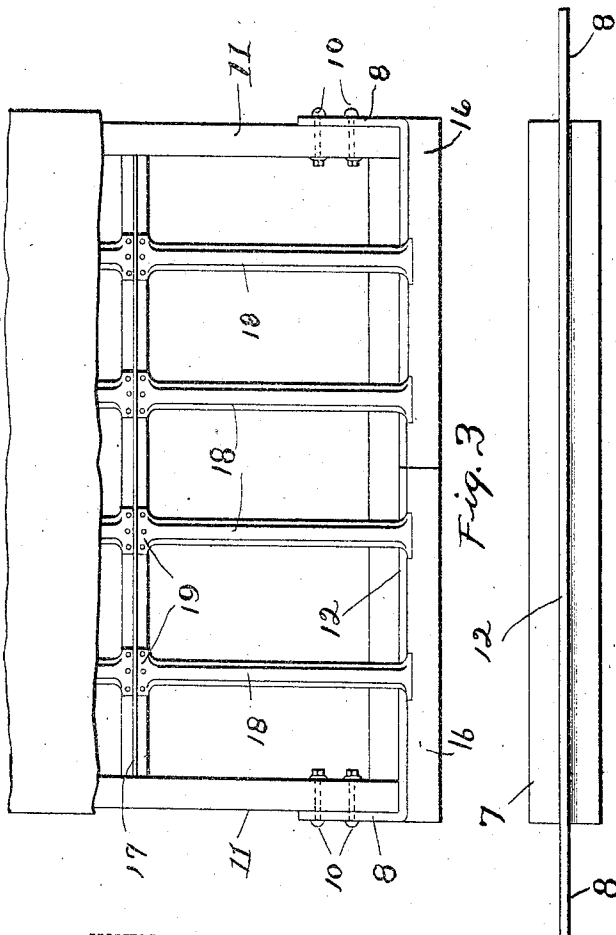
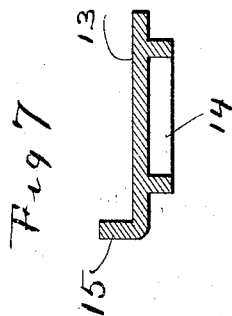
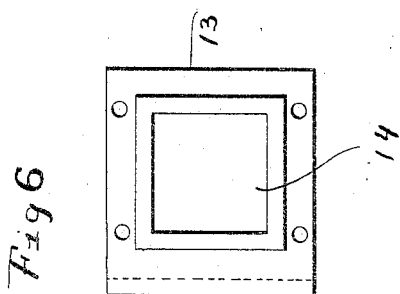
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2 SHEETS—SHEET 2.

983,302.



WITNESSES

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UNITED STATES PATENT OFFICE.

WALTER P. MURPHY, OF CHICAGO, ILLINOIS.

CAR.

983,302.

Specification of Letters Patent.

Patented Feb. 7, 1911.

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To all whom it may concern:

Be it known that I, WALTER P. MURPHY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cars, of which the following is a specification.

In the drawing, Figure 1 is an end view of a car frame embodying my invention; Fig. 2 is a section of the same on the line 2-2, Fig. 1, looking in the direction of the arrow; Fig. 3 is a top plan view of a car, parts being broken away; Fig. 4 is a top plan view of the end plate; Fig. 5 is a perspective view of the end plate; Fig. 6 is a bottom plan view of a post plate, and Fig. 7 is a cross sectional view of the same.

The frequent bumping and shifting of freight cars causes the load to shift against the ends of the car, which results in weakening the end structure and finally in breaking it away from the rest of the car.

The object of my invention is to strengthen the end structure of a car.

My invention consists of means whereby the end plate, as well as the posts in the end of a car, are firmly secured to the car structure in such manner that they resist the tendency of the load to weaken and force the end of the car out.

1 represents an end sill of a car preferably constructed of metal I-beam.

2 are corner posts and 3 end posts constructed preferably of metal of any suitable shape in cross section. 4 are braces preferably of metal.

The end plate is shown in the drawings as consisting of a metal member of T-shape having the web 6 and the base flanges 7. The web extends beyond the base flanges thereby providing projecting ends 8, which are bent at right angles to the main body of the web and provided with a series of bolt-holes 9, through which bolts 10 are adapted to pass, to secure the end plate to the side plates 11 of the car. By this construction, I am enabled to tie the end plate very securely to the car structure, and at the same time form a very strong corner for the car, which will very materially stiffen the roof structure, inasmuch as the end plate with the side plates form a continuous rigid frame, upon which the roof structure is secured. The web 6 of the end-plate is split for the greater portion of its length and the upper split portion 12 spread apart from

the lower portion upwardly so as to form a truss, and at the same time, give a pitch to the end plate corresponding with the desired pitch of the roof of the car.

13 is a post plate bolted securely to the under face of the base flange 7 of the end plate and provided with a socket 14, which receives the end of the corner and end posts as well as the braces, and is provided with an upwardly extending lug or rib 15, adapted to engage the inner face of the end plate, as clearly shown in Fig. 2. Plates of this construction are also secured to the end-sill 1. Considerable pressure is sometimes brought to bear on the end structure of a car by reason of the shifting of the load, which frequently results in the end of the car being torn out. I provide against this by bolting the socket plates 13 to the end plate and to the end sill, and by reason of the contact of the lug 15 with the inner face of the sill and plate respectively.

16 is a filler block secured on the outside of the end plate, and resting on one of the base flanges 7.

The carlines 17 are preferably of T-shape and suitably secured to the side plates 11 at their ends.

18 are purlins constructed, preferably, of commercially rolled flanged channel metal, the ends of which are spread laterally beyond the body lines to form a wide bearing 19, which is securely bolted to the base flange of the carline, thereby securing a bracing effect. This increased spread of the flange 19 on the carline serves to stiffen the roof structure. The outer end of the carlines, at the ends of the car, are bent downward at right angles as at 20 over the outer face of the spread portion 12 of the end plate to which they are securely bolted by means of the bolts 21. By bending the ends of the purlins down over the outer face of the end plate, as shown in the drawing, I further strengthen the end structure of the car.

I claim:—

1. An end plate for a car comprising a tee beam shape iron slit longitudinally between its ends and spread apart in truss form.

2. An end plate for a car consisting of tee-shaped metal, the web of which extends beyond the ends of the base flange and is bent rearwardly at right angles to the plate.

3. An end plate for a car comprising a commercially formed metal structure, the

web of which between its ends is split longitudinally and expanded in truss form, the ends of the web of the metal structure extending beyond the main body and bent at right angles.

5 4. An end plate for cars comprising a tee beam shape, the web of which between its ends is slit longitudinally and one portion on one side of said slit moved a suitable distance from the plane of the slit into truss form.

10 5. In a car, the combination with side plates, of an end plate comprising a commercially rolled iron split for a portion of its length and spread apart to give a pitch to the roof, the web of said plate extending beyond the ends of the base flange and bent at right angles against the side plates to which they are secured, said end plate being

15 20 also secured to the ends of the purlins.
6. In a car, the combination with side plates, of an end plate comprising a commercially rolled tee-shaped iron split for a

portion of its length and spread apart to correspond with the pitch of the roof, the web of said plate extending beyond the ends of the base flange and bent at right angles against the side plates to which they are secured, said end plate being adapted to receive and be secured to the ends of the purlins.

7. In a car, the combination with the end sill and end plate, of post plates secured on said sill and end plate, and having a socket in one face and a lug projecting from one edge of the opposite face to engage the inner face of the end sill and end plate, and end posts secured in the sockets of the post plates between the end sill and plate.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER P. MURPHY.

Witnesses:

HARRY W. STANNARD,
JOSEPHINE H. HARTNETT.