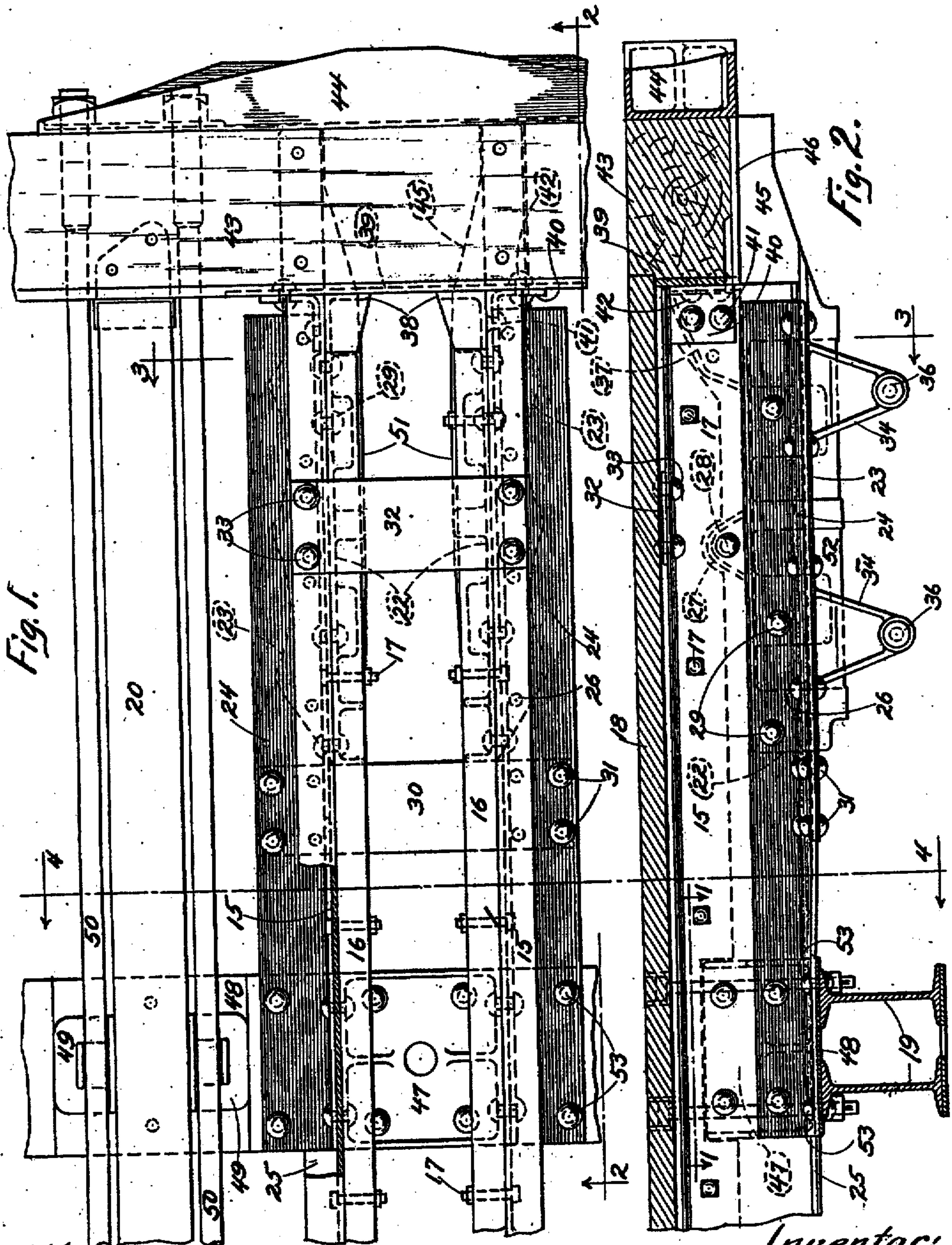


E. C. ANDERSON.  
CAR FRAMEWORK.  
APPLICATION FILED SEPT. 22, 1908.

Patented Aug. 17, 1909.  
2 SHEETS—SHEET 1.

931,555.



Witnesses:  
Florence Pluell  
Lillian A. Kirby

Inventor:  
Emil C. Anderson  
By Sheridan & Wilkinson  
Attys

E. C. ANDERSON.

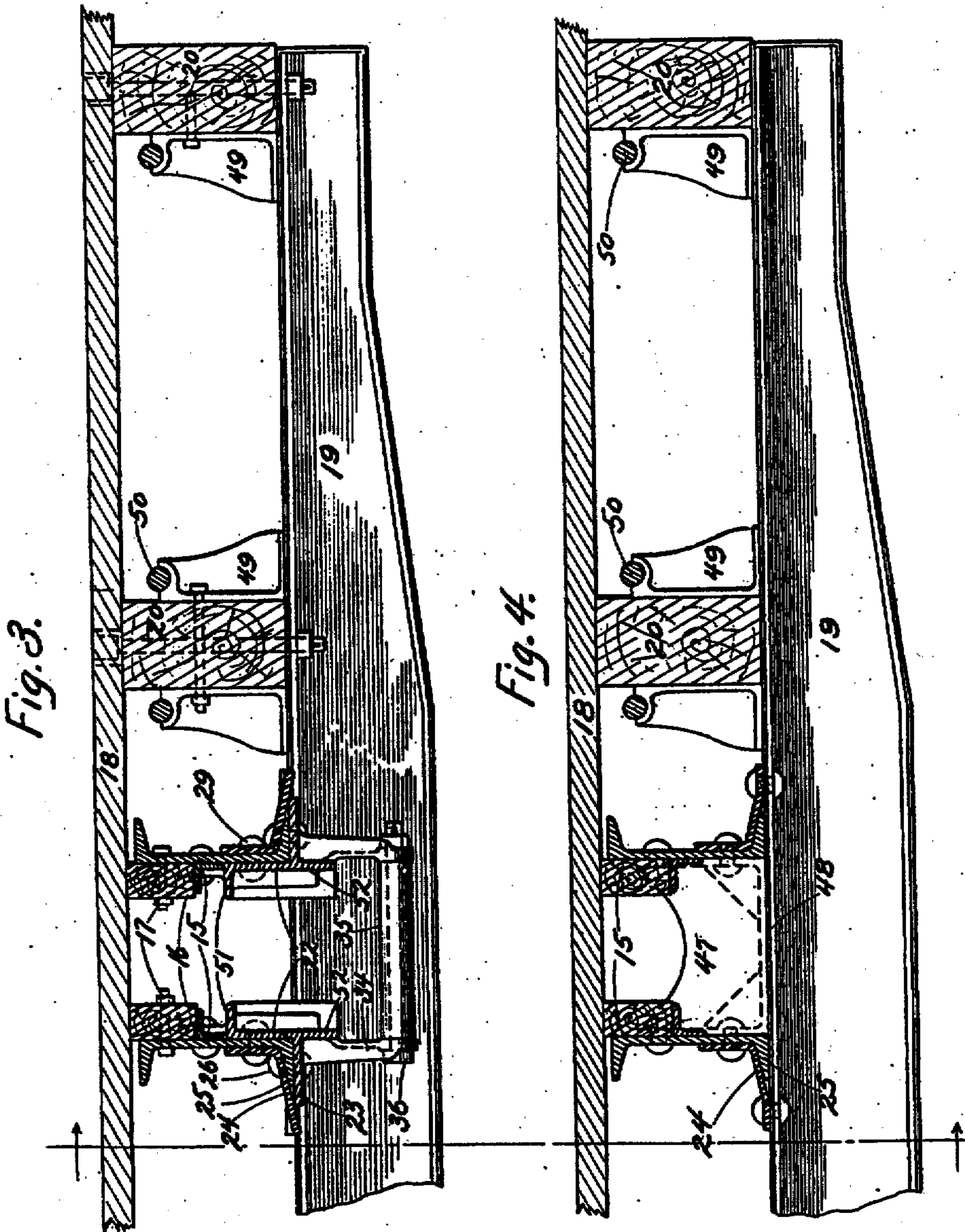
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# UNITED STATES PATENT OFFICE.

EMIL C. ANDERSON, OF DOWNERS GROVE, ILLINOIS.

## CAR-FRAMEWORK.

No. 931,555.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed September 22, 1908. Serial No. 454,177.

*To all whom it may concern:*

Be it known that I, EMIL C. ANDERSON, a citizen of the United States, residing at Downers Grove, in the county of DuPage and State of Illinois, have invented certain new and useful Improvements in Car-Framework, of which the following is a specification.

The principal object of my invention is to provide an improved reinforced center sill for cars. This object and others will be made apparent in the following specification and claims, taken in connection with the accompanying drawings, in which—

Figure 1 is a top plan view taken partly in section on the line 1, 1 of Fig. 2. Fig. 2 is a side elevation taken partly in section on the line 2, 2 of Fig. 1. Figs. 3 and 4 are transverse sections taken, respectively, on the correspondingly numbered lines in Figs. 1 and 2.

I have chosen to illustrate one particular embodiment of my invention in the drawings, which show how the invention may be incorporated upon the removal of a wooden center sill from a freight car and the substitution of an iron center sill comprising two channel beams. In this case if the channel beams alone were substituted for the wooden sill members, the buffing stresses would act principally along their lower flanges, and thus there would be a tendency to cause these flanges to buckle. My invention obviates this difficulty and otherwise contributes to increase the strength of the under framework of the car. If the weight of the channel beams were increased sufficiently to have the requisite strength without reinforcement, then the extra material introduced between the body bolsters and elsewhere would be wasted and would constitute a dead load. By my invention the center sill is reinforced exactly where greater strength is needed and there is no extra material employed.

The center sill channel beams 15 have wooden nailing strips 16 fastened thereto along their upper edges by means of the bolts 17. The floor planks 18 are attached to the nailing strips 16 and to the intermediate and side sills 20. The body bolster comprises two transverse I-beams 19 overlaid with a plate 48. The side and intermediate sills 20 rest on this plate 48.

The draft castings 22, which are intended

to support the draft gear, are attached to the webs of the channel beams 15 by means of rivets 29. Each draft casting 22 has a flange 23 that extends under the lower flange 25 of the corresponding channel beam 15. Overlying this flange 25 is the angle iron reinforcing member 24. Rivets 26 pass through all three flanges 23, 24 and 25. Along its upper edge each draft casting 22 has an inwardly directed flange 51 above which at one point is a lug 27 (see Fig. 2) which is secured to the web of the corresponding channel beam 15 by means of a rivet 28.

Extending transversely under the channel beams 15, at the inner ends of the draft castings 22, is the plate 30, having its ends secured to the reinforcing angle iron 24 by means of the rivets 31. A similar plate 32 extends across the two channel beams 15 being secured to their upper flanges by the rivets 33.

From the lower edge 52 of each draft casting 22 depend integral extensions 34. Between the extensions 34 of each pair lies a wrought iron thimble 35, secured in place by means of the bolt 36. Toward the end of the car each draft casting 22 has an oblique web 37 (see Fig. 2) which ends in an abutment 38. These abutments 38 lie against the iron plate 39 which extends across the ends of the channel beams 15. Angular corner irons 40 are secured by rivets 41 to the webs of the channel beams 15, and by other rivets 42 to the plate 39. A wooden end sill 43 lies against the plate 39, and beyond this is a malleable cast iron buffer 44. The ends of the draft casting 22 project under the sill 43 as indicated by the reference numeral 45.

A spacer 47 lies between the two channel beams 15 above the body bolster 19—48. This spacer is riveted to the webs of the channel beams 15, and is also riveted through the plate 48 to the flanges of the I-beams 19.

Above the body bolster 19 beside the intermediate and side sills 20 are the brackets 49, which form supports for the truss rods 50.

The reinforcing angle irons 24 extend from the body bolster to the end of the car, being secured to the I-beams 19 of the bolster by means of the rivets 53. Thus they strengthen the center sill channel beams 15 so as to enable them to resist buffing



shocks. Because of the way in which they combine with the draft castings, as well as with the channel beams, they afford a very rigid construction necessitating the addition  
5 of very little extra material.

While I have disclosed a specific form of body bolster in combination with my reinforced center sill, it will of course be understood that the invention can be combined  
10 with any type of body bolster. In using the term—draft casting, I do not mean to necessarily imply that it must be an actual casting, for it will be readily appreciated that this member might be a pressed shape and  
15 yet my invention would be substantially the same.

I claim:

1. In combination, a center sill comprising a channel beam, a draft casting having a  
20 flange adjacent to one flange of said channel beam, and a reinforcing angle iron adjacent to said flange on the other side thereof from the draft casting.

2. In combination, a center sill comprising  
25 a channel beam, a draft casting having a flange adjacent to one flange of said channel beam, a body bolster beneath the center sill, and a reinforcing angle iron adjacent to said flange of the channel beam extending from  
30 the body bolster to the end of the car.

3. In combination, a center sill comprising a channel beam, a body bolster beneath said center sill, and a reinforcing angle iron having one flange riveted to the web of the chan-  
35 nel beam and the other flange riveted to one flange of the channel beam, said angle iron having one end riveted to the body bolster and extending therefrom to the end of the car.

40 4. In combination, a center sill comprising a channel beam, a draft casting riveted to the face of the channel beam away from its flanges, a flange on said draft casting lying under one flange of the channel beam, and a

reinforcing angle iron lying over said flange 45 of the channel beam.

5. In combination, a center sill comprising two channel beams with their flanges turned away from each other, draft castings riveted to the inner faces of the respective channel  
50 beams, and reinforcing angle irons overlying the lower flanges of the said channel beams and riveted thereto.

6. In combination, a center sill comprising a channel beam, a nailing strip bolted to the  
55 upper edge thereof, a draft casting riveted along the lower edge thereof, and a reinforcing member riveted along the lower flange of the channel beam edge and extending from the body bolster to the end of the  
60 car.

7. In combination, a body bolster comprising two transverse I-beams, a plate overlying the same, two center sill channel beams above said plate their flanges being riveted  
65 thereto and to the flanges of the I-beams, and reinforcing members each having one end riveted to the body bolster and extending thence to the end of the car, said reinforcing members being riveted along their  
70 length to the said channel beams.

8. In combination, a center sill comprising a channel beam, a body bolster beneath said center sill, and a reinforcing angle iron having one flange riveted to the web of the chan-  
75 nel beam and the other flange of the reinforcing angle iron lying along the lower flange of the channel beam, said angle iron having one end riveted to the body bolster and extending therefrom to the end of the  
80 car.

In testimony whereof, I have subscribed my name.

EMIL C. ANDERSON.

Witnesses:

LILLIAN A. KIBBY,  
FLORENCE FLORELL.

It is hereby certified that in Letters Patent No. 931,555, granted August 17, 1909, upon the application of Emil C. Anderson, of Downers Grove, Illinois, for an improvement in "Car-Framework," an error appears in the printed specification requiring correction, as follows: Line 59, page 2, the word "edge" should be  
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Signed and sealed this 28th day of September, A. D., 1909.

[SEAL.]

C. C. BILLINGS,

Acting Commissioner of Patents.



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*Acting Commissioner of Patents.*