A. E. OSTRANDER.

CAR UNDERFRAME.

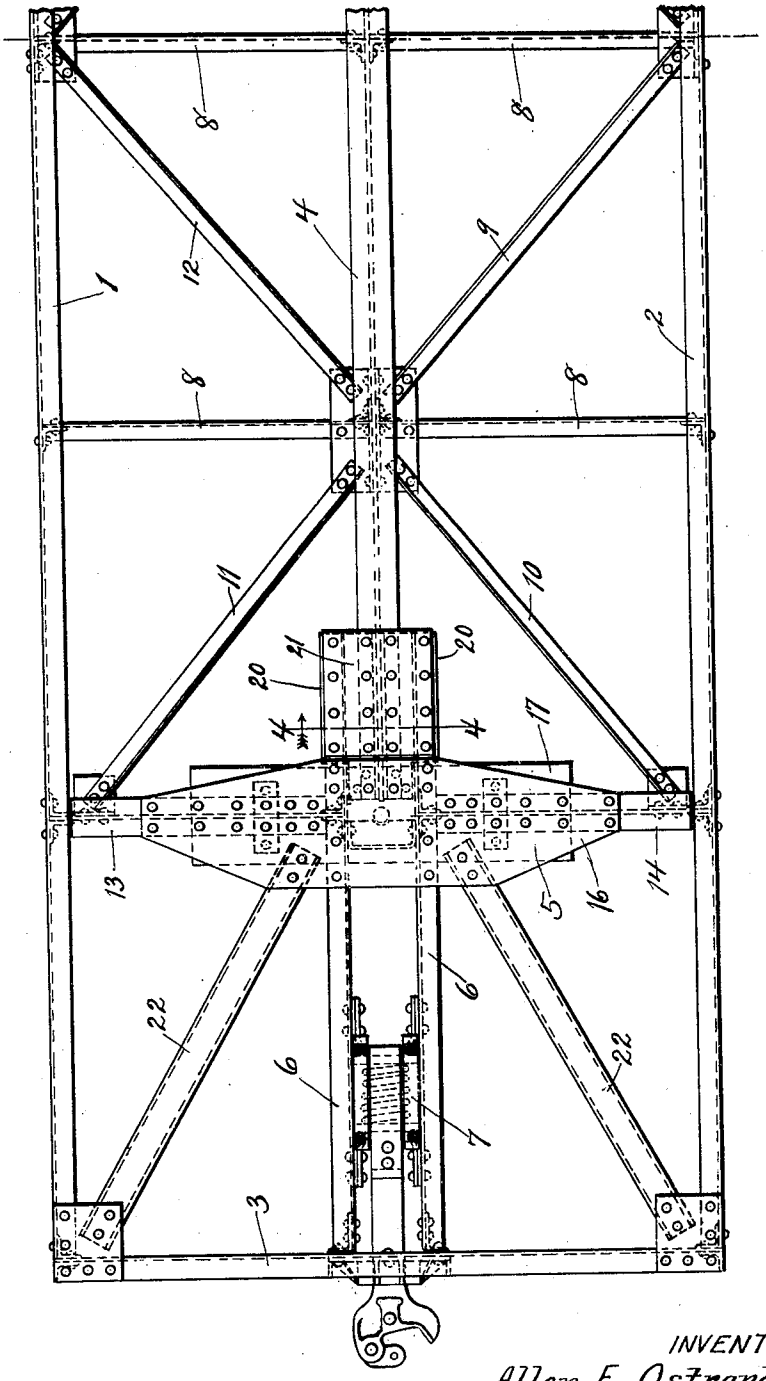
APPLICATION FILED JAN. 15, 1920.

1,370,762.

Patented Mar. 8, 1921.

2 SHEETS—SHEET 1.

Fig. 1.



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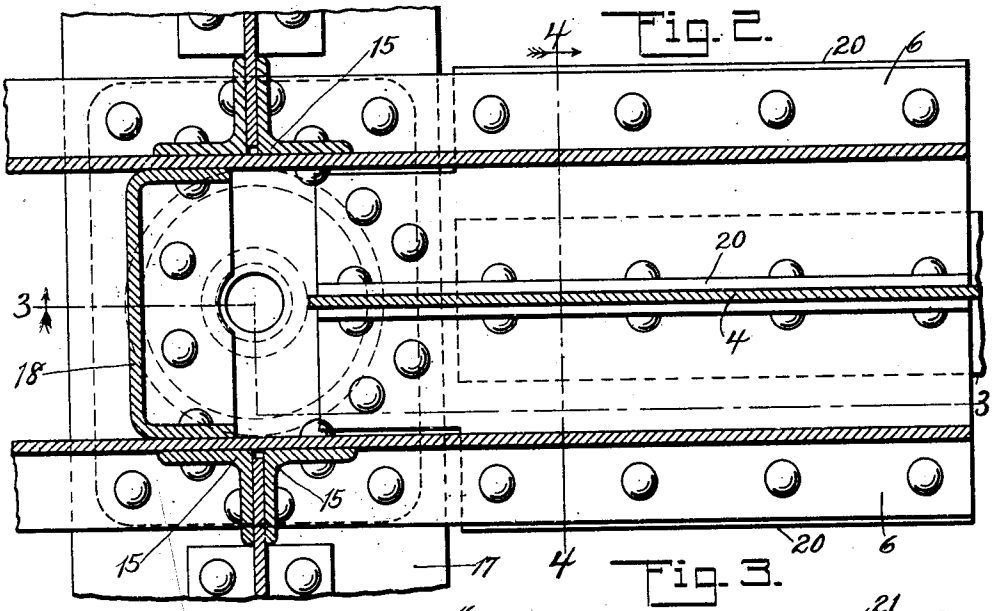


Fig. 2.

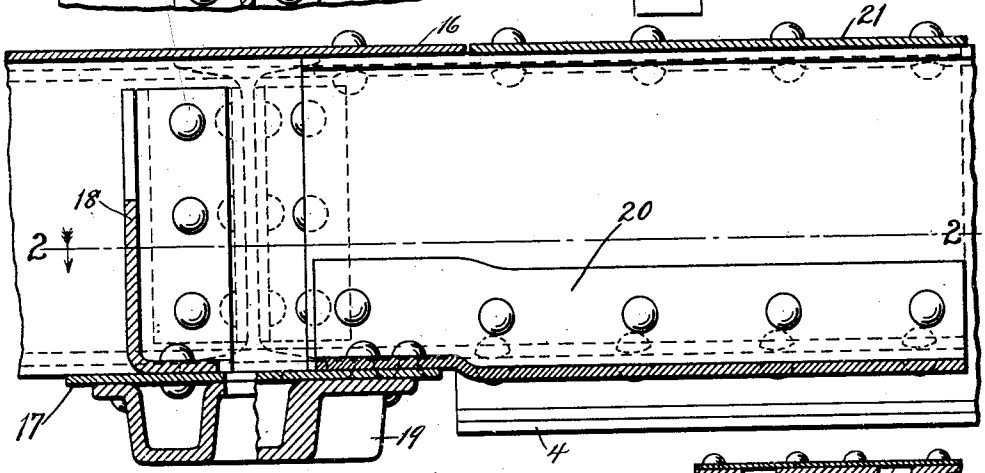


Fig. 3.

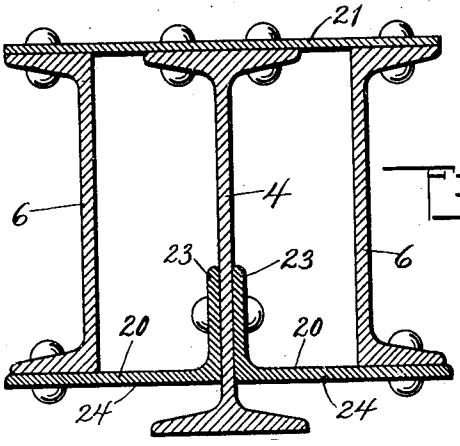


Fig. 4.

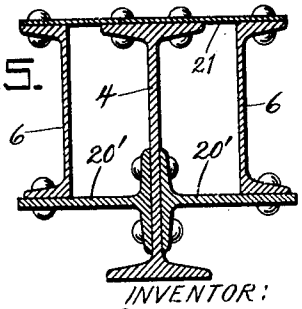


Fig. 5.

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UNITED STATES PATENT OFFICE.

ALLEN E. OSTRANDER, OF RIDGEWOOD, NEW JERSEY, ASSIGNOR TO AMERICAN CAR AND FOUNDRY COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

CAR-UNDERFRAME.

1,370,762. Specification of Letters Patent. Patented Mar. 8, 1921.

Application filed January 15, 1920. Serial No. 351,662.

To all whom it may concern:

Be it known that I, ALLEN E. OSTRANDER, residing at Ridgewood, county of Bergen, State of New Jersey, and being a citizen of the United States, have invented certain new and useful Improvements in Car-Underframes, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and to use the same, reference being had to the accompanying drawings, which illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof within the scope of the claims will occur to persons skilled in the art.

In said drawings:

Figure 1 is a plan view of a portion of a car frame embodying the improvements;

Fig. 2 is a section through the draft sills, center sill and body bolster taken on the line 2—2 of Fig. 3;

Fig. 3 is a section taken on the line 3—3 of Fig. 2;

Fig. 4 is a section taken on the line 4—4 of Fig. 2; and

Fig. 5 is a section, similar to Fig. 4, of a modification.

It is the object of my invention to provide an improved car underframe and more particularly, to provide an improved manner of joining the center sill and draft sills of a car underframe.

Referring to Fig. 1, 1 and 2 designate the side sills and 3 an end sill joining the side sills, these members being of any suitable or desired shape. 4 designates the center sill comprising a single I-beam that extends from the body bolster 5 to a similar bolster (not shown) at the other end of the car and 6 designates the draft sills, shown as channel members placed with their flanges projecting outwardly and extending from the end sill 3 through and beyond the bolster 5, the inner ends of the draft sills 6 being placed one on each side of the center sill 4 and spaced therefrom. Mounted between the draft sills 6 is the usual draft gear 7. Cross beams 8 and diagonal braces 9, 10, 11 and 12 join the side sills 1 and 2 to the center sill 4.

The bolster 5 comprises members 13 and 14, shown as I-beams in the drawings, extending from the side sills 1 and 2 to the draft sills 6, the members 13 and 14 being joined to the sills by means of angle bars 15, as shown in Fig. 2. Top and bottom cover plates 16 and 17, respectively, are riveted to the flanges of the bolster members 13 and 14, the draft sills 6 and the center sill 4 and a flanged spacing member 18 is secured between the draft sills 6 with its flanges riveted to the webs of the draft sills 6 and the bottom cover plate 17. To the bolster is attached the usual center plate 19. Diagonal braces 22 connect the cover plate 16 and the end sill 3.

As shown in Fig. 2, the center sill 4 is of greater depth than the bolster 5 so the lower flanges and a portion of the web of the center sill 4 are cut away for a short distance at the end to permit of the end of the center sill 4 being inserted between the top and bottom cover plates 16 and 17 of the bolster 5.

Joining the draft sills 6 to the center sill 4 are the members 20. These members may be angle bars, as shown in Figs. 2, 3 and 4, with an upwardly projecting flange 23 riveted to the web of the center sill 4 and an outwardly extending flange 24 passing under the corresponding draft sill 6 and riveted to the lower flange thereof. As shown in Fig. 4, the center sill 4 is of slightly greater depth than the draft sills 6. Where this difference is greater, the member 20 can be placed with its vertical flange 23 projecting downwardly or a member of substantially T-shape, as the member 20′ of Fig. 5, may be used, the vertically positioned flanges being riveted to the center sill web and the outwardly extending flange passing beneath the draft sill and being secured to the lower flange. The bolster ends of the members 20 are bent, as shown in Fig. 3, so that a portion of the outwardly projecting flange 24 will be in a plane parallel to the plane of the rest of that flange and the outer part of the bent-up portion of the flange 24 is cut away, as shown in Fig. 2, so that the bent-up portion of the flange 24 can rest upon the bottom cover plate 17 of the bolster 5 and be riveted thereto and the remainder of the flange 24 extend beneath the lower flange of the draft sill 6 for connection therewith. A top cover plate 21 extends from the cover plate 16 substantially to the inner ends of the draft sills 6 and is riveted to the upper

flanges of the draft sills 6 and the center sill 4.

What I claim is:

1. In a car underframe, a center sill having a web, a body bolster, a pair of flanged draft sills extending through said bolster one on each side of the center sill and means connecting said center sill web and a flange on each of said draft sills.

2. In a car underframe, a center sill having a web, a body bolster, a pair of flanged draft sills extending through said bolster one on each side of said center sill, a spacing member connecting said draft sills and bolster and means connecting said center sill web and a flange of each of said draft sills.

3. In a car underframe, a center sill, a pair of draft sills and angle bars connecting the center sill web and draft sill flanges.

4. In a car underframe, a center sill having a web, a pair of flanged draft sills one on each side of the center sill and angle bars connecting the center sill web and a flange on each draft sill.

5. In a car underframe, a body bolster, a center sill engaging said bolster, a pair of draft sills passing through said bolster one on each side of the center sill and angle bars connecting said center sill web and draft sill flanges.

6. In a car underframe, a body bolster, a center sill having a web engaging said bolster, a pair of flanged draft sills passing through said bolster one on each side of the center sill, angle bars connecting the center sill web and a flange of each draft sill and a cover plate connecting flanges of said sills.

7. In a car underframe, a body bolster, a center sill engaging said bolster, a pair of draft sills passing through said bolster, a spacing member connecting said draft sills and bolster and angle bars connecting said center sill web and draft sill flanges.

8. In a car underframe, a bolster, a center sill having a web, a flanged draft sill and an angle bar connecting said center sill web to said draft sill flange and bolster.

9. In a car underframe, a bolster, a center sill, draft sills extending through said bolster, a spacing member connecting said draft sills and bolster and members having vertical flanges connected to the center sill and horizontal flanges connected to the draft sills.

10. In a car underframe, a bolster, a center sill having a web, flanged draft sills extending through said bolster, a spacing member connecting said draft sills and bolster and members having vertical flanges connected to the center sill web and horizontal flanges connected to the draft sill flanges.

11. In a car underframe, a bolster, a center sill having a web, flanged draft sills extending through said bolster, a spacing member connecting said draft sills and bolster and flanged members secured to said center sill web and having horizontally extending flanges secured to the draft sill flanges.

12. In a car underframe, a center sill having a web, flanged draft sills a spacing member connecting said draft sills and flanged members secured to said center sill web and having horizontally extending flanges secured to the draft sill flanges.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ALLEN E. OSTRANDER.

Witnesses:
LEO V. JOYCE,
JESSE Y. GLENN.