R. E. FRAME & J. M. ROHLFING.

TRUCK BOLSTER.

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1,001,833.

Patented Aug. 29, 1911.

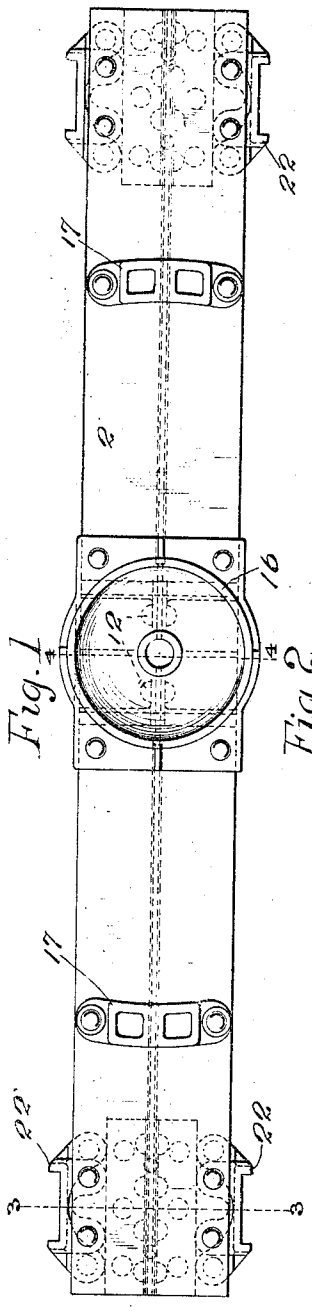

Fig. 1

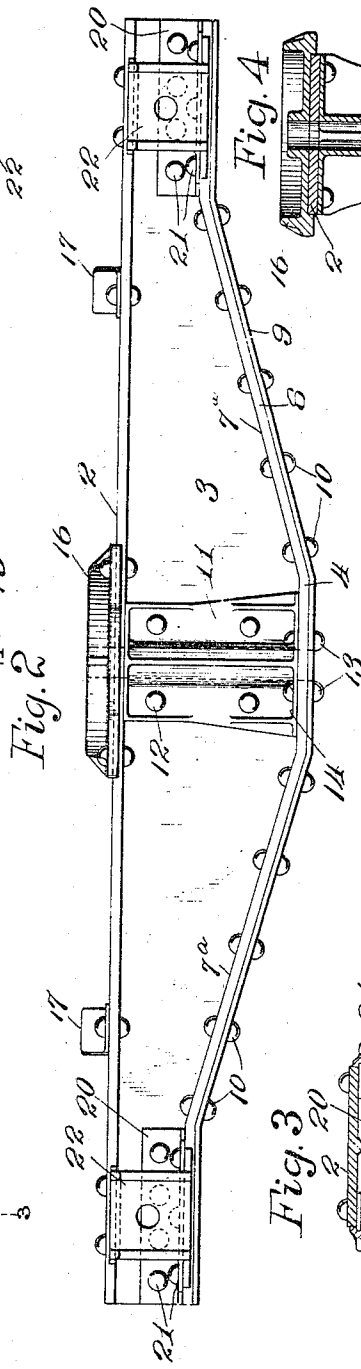

Fig. 2

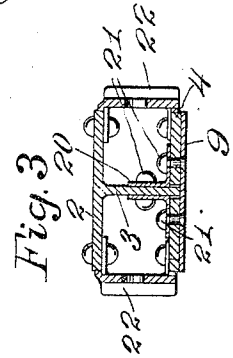

Fig. 3

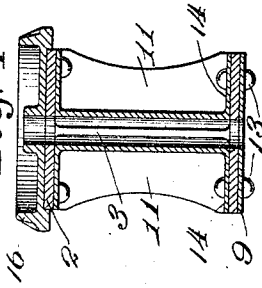

Fig. 4

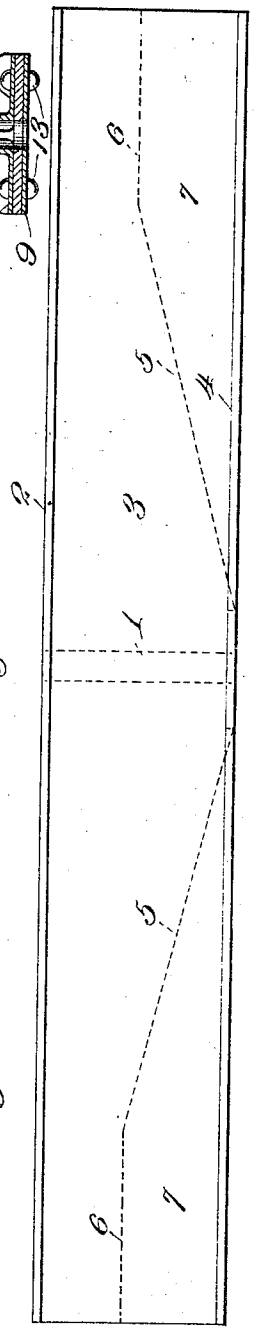

Fig. 5

Witnesses:

Inventor:
Robert E. Frame
John M. Rohlfing
by F. H. Gibbs Atty

UNITED STATES PATENT OFFICE.

ROBERT E. FRAME AND JOHN M. ROHLFING, OF ST. LOUIS, MISSOURI, ASSIGNORS TO AMERICAN CAR & FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

TRUCK-BOLSTER.

1,001,833. Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed June 15, 1909. Serial No. 502,368.

To all whom it may concern:

Be it known that we, ROBERT E. FRAME and JOHN M. ROHLFING, residing at St. Louis, Missouri, and being citizens of the United States, have invented certain new and useful Improvements in Truck-Bolsters, 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 will occur to persons skilled in the art.

In said drawings: Figure 1 is a plan view of improved bolster. Fig. 2 is an elevational view thereof. Fig. 3 is a transverse sectional view, the section being taken on line 3—3 of Fig. 1. Fig. 4 is a transverse sectional view, the section being taken on line 4—4 of Fig. 1. Fig. 5 is a diagrammatic elevational view showing the principal bolster girder member in full lines as it comes from the mills and showing in dotted lines a central vertical opening which is formed through the top and bottom flanges and the web portion of the girder, and showing in other dotted lines the lines of cutting indicating the parts of the girder web which are severed from the principal web portions.

The object of the invention is to provide a simple, strong and durable bolster formed primarily of a single rolled girder of H section with the web vertically disposed and the flanges horizontally disposed. While an H section is specified, because this section is considered as best adapted for the purposes, an I-beam may be substituted for the H section, the principal difference between the two being the width of the horizontal flanges at the top and bottom of the girder. Before attaching the auxiliary parts to this section necessary to complete the bolster a vertical opening, indicated at 1 in Fig. 5, is formed through the top flange 2, the web 3 and bottom flange 4, this opening extending entirely through the girder, while the web is cut through along the oblique lines 5 and the horizontal lines 6 forming extensions of said oblique lines, to the ends of the web. The metal of the web is also cut away from the lower flanges 4 so that the portion 7 of the web may be removed. After this is done the lower flange 4 is bent upwardly to position contiguous the new lower edge of the web 3 as indicated by the numeral 7^a in Fig. 2, the metal of the flange being bent to form the oblique portion 8 between the center part of the bolster and the inner line of the spring seats, and extends thence in a horizontal direction outwardly. This is done with both ends of the flange 4 and the bottom cover plate 9 is placed in position, bent to the proper form, and connected by means of the rivets 10 with said bottom flanges, after which the centrally disposed vertical castings or pressings 11, one on each side of the web 3, are secured together and to said web by means of horizontally disposed rivets 12, said central members forming pin sockets in the completed bolster and serving as strengthening members of said bolster.

As noted in Figs. 2 and 4, rivets 13 extend downwardly through the laterally projecting flanges 14 of the member 11 through said flanges, through the bottom flange 4 of the girder, and through the bottom cover plate 9 of the bolster.

It is to be noted that substantially within the range of projection of flanges 14 the bottom flange of the girder remains in position as an integral part of the girder and connected with the web thereof.

The top flanges 2 are integral with the web 3 and are continuous from end to end of the bolster and to these top flanges 2 are secured the bolster center bearings 16, which may be of any preferred type or construction. Secured also to these top flanges are side bearings 17 while angles 20 are connected with the web 3 at each end of the bolster and with the bottom flanges 4 and bottom cover plate 9 by rivets 21, as best shown in Fig. 3. Projecting outwardly beyond the top and bottom flanges 2 and 4 are column guide castings, or their equivalent, 22, which are connected with the top flanges 2 and with the bottom flanges 4 and bottom cover plate 9 by suitable rivets, as shown in Fig. 3. These column guides serving also as vertical strengthening members of the bolster. If preferred, the bottom flanges 4 of the girder may be left united and the line of separation extend through the web 3 so

that the bottom flanges may serve as a continuous plate when bent into position shown in Fig. 2 instead of comprising separated portions as indicated in Fig. 3.

It is obvious that the centrally disposed members 11 extend from the lower flanges 4 to and in contact preferably with the upper flanges 2, thereby providing continuous compression members between said flanges, which compression members independent of the web 3, serve, when placed in position, as a pin socket.

It will be observed when the flanges 4 are severed vertically from the part 7 and the part 7 is removed, said flanges will be spaced apart by removal of the material therebetween of the part 7, and thus when the flanges 4 are bent upwardly they readily and naturally assume a position at either side of the remaining portions of the web of the H-section, as indicated in Fig. 3.

Of course, when the severance of the part 7 from the flanges 4 occurs horizontally in the planes of the upper faces of the flanges, the integral formation of the flanges with respect to themselves and the intervening material of the web is maintained, and in such instance the flanges are merely brought up to a position with the material in the median line between the flanges in contact with the remaining edge of the web left by the removal of the part 7.

What we claim is:

1. In a bolster, the combination comprising a rolled member having integral upper flange, depending web and parti-integral bottom flange severed from said web at its ends and means for connecting the ends of the bottom flange with said web.

2. In a bolster, the combination comprising a rolled member having integral upper flange, depending web and parti-integral bottom flange and a bottom cover plate.

3. In a bolster, the combination comprising a rolled member having integral upper flange, depending web and parti-integral bottom flange, a bottom cover plate and means for connecting said bottom cover plate with the web.

4. A bolster comprising a single rolled member having integral top flange and web and parti-integral flexed bottom flange, the flexed portion of said bottom flange being severed from adjacent portions of said web.

5. A bolster, comprising in combination a rolled H section with flexed bottom, and reinforcing means for said bottom flexed to conform to the contour of the flexed bottom.

6. In a bolster, a rolled section comprising integral top flanges and web with parti-integral bottom flanges severed from said web at one of its ends and connected with said web near said end.

7. In a bolster, a rolled section comprising integral top flanges and web with parti-integral bottom flanges severed from said web at its ends, independent means connecting said flanges with said web near its ends, a center bearing member connected with said top flanges and stiffening means connected with the web below said center bearing.

8. In a bolster, a rolled section comprising integral top flanges and web with parti-integral bottom flanges connected with said web near its ends and a continuous bottom cover plate connected with said bottom flanges.

9. A rolled bolster member having integral top flanges and web, bottom flanges integral with said web near their middle portions and bent upwardly near their outer ends and a bottom cover plate substantially in contact with said web near its ends.

10. In a bolster, a rolled member having a web, top and bottom flanges integral with said web near the middle portion, the bottom flange being separated from the principal web portion near the ends, and a longitudinally disposed tension member extending under said middle portion and connected with said separated web portions.

11. In a bolster, a rolled member having a web, top and bottom flanges integral with said web near the middle portion, the bottom flange being separated near the ends, means for connecting the end portions of the separated flanges with said web and a longitudinal tension member extending below said web.

12. In a bolster, a rolled member having bifurcated lower flange and a web of reduced depth at its ends and means for connecting said bifurcated flange with the reduced web portions.

13. In a bolster, a rolled flanged member provided with a vertical web of uniform thickness and reduced depth near its ends and a parti-integral lower flange, severed from said web through part of its length along the line of juncture between said flanges and web.

14. In a bolster, a rolled flanged member provided with a vertical web of uniform thickness and reduced depth near its ends and a bifurcated parti-integral flange.

15. In a bolster, a rolled flanged member provided with a vertical web of uniform thickness and reduced depth near its ends, a parti-integral lower flange, severed from the reduced portions of said web along the line of juncture between said flange and web, and angularly shaped means adapted to connect the outer end portions of the lower flange with said web.

16. In a rolled bolster, an integral top flange, an integral discontinuous web and parti-integral bottom flange severed from said web through part of its length.

17. In a rolled built up bolster, an integral top flange and discontinuous web and

a parti-integral bottom flange severed from said web through parts of its length and connected with said web near its ends, in combination with longitudinally extending connecting means.

18. In a rolled built up bolster, an integral top flange and discontinuous web and a parti-integral bifurcated bottom flange connected with said web near its ends, in combination with longitudinally extending connecting means.

19. In a rolled built up bolster, an integral top flange and discontinuous web and a parti-integral bottom flange severed from said web through part of its length and connected with said web near its ends, in combination with vertically disposed stiffening members.

20. In a rolled built up bolster, an integral top flange and discontinuous web and a parti-integral bottom flange connected with said web near its ends, in combination with a bottom cover plate and means connecting said plate with said web.

21. In a bolster comprising a plurality of parts, a single rolled flanged member having perforated top flange and cut out web portion, and a bottom cover plate extending substantially the length of said rolled member.

22. In a bolster, the combination of a rolled flanged member comprising integral top flange and vertical web portions and a bottom flange integral with the web near its middle portion only, and a bottom cover plate adapted to contact with said web away from said middle portion.

23. In a bolster, the combination of a rolled flanged member comprising integral top flange and vertical web portions and a bottom flange integral with the web near its middle portion only, a bottom cover plate adapted to contact with said web away from said middle portion and a center bearing above said middle portion.

24. In a bolster, the combination of a rolled flanged member comprising integral top flange and vertical web portions and a bottom flange integral with the web near its middle portion only, a bottom cover plate adapted to contact with said web away from said middle portion and vertical stiffening members between said integral top and bottom flanges.

25. In a bolster, the combination of a rolled flanged member comprising integral top flange and vertical web portions and a bottom flange integral with the web near its middle portion only, a bottom cover plate adapted to contact with said web away from said middle portion and vertical stiffening members connected with said web and said integral portion of the bottom flange.

26. In a bolster, a rolled section comprising integral top flanges and web with parti-integral bottom flanges connected with said web near its ends, a center bearing member connected with said top flanges, and stiffening means connected with the web below said center bearing and with said top and bottom flanges.

27. In a bolster, a rolled section comprising integral top flanges and web with parti-integral bottom flanges and column guides connecting said top and bottom flanges.

28. In a bolster, the combination comprising a rolled member having integral upper flange, depending web and parti-integral bottom flange, means for connecting the ends of the bottom flange with said web, and a column guide connecting said top and bottom flange.

29. In a bolster, the combination comprising a rolled member having integral upper flange, depending web and parti-integral bottom flange, means for connecting the ends of the bottom flange with said web and means fixed to the outer edges of said flanges for connecting said flanges.

30. A bolster comprising a single rolled member having integral top flange and web and parti-integral bifurcated flexed bottom flange.

31. A bolster comprising a single rolled member having a continuous top flange and a bifurcated bottom flange, and means connecting the bifurcated portions of said bottom flange.

32. A bolster comprising a single rolled member having a continuous top flange and a bifurcated bottom flange, and means connecting the bifurcated portions of said bottom flange at its ends.

33. A bolster comprising a single rolled member having a continuous top flange and a bifurcated bottom flange, and means connecting the bifurcated portions of said bottom flange together and to said top flange.

34. A bolster comprising a single rolled member having a continuous top flange and a bifurcated bottom flange, and column guides connecting the bifurcated portions of said bottom flange to said top flange.

In witness whereof we have hereunto set our hands in the presence of two witnesses.

ROBERT E. FRAME.
JOHN M. ROHLFING.

Witnesses:
S. T. ENSIGN,
ROBERT G. ELLIS.