H. M. PFLAGER.

RAILWAY CAR UNDERFRAME.

APPLICATION FILED JAN. 14, 1913.

1,066,840.

Patented July 8, 1913.

Fig. 1.

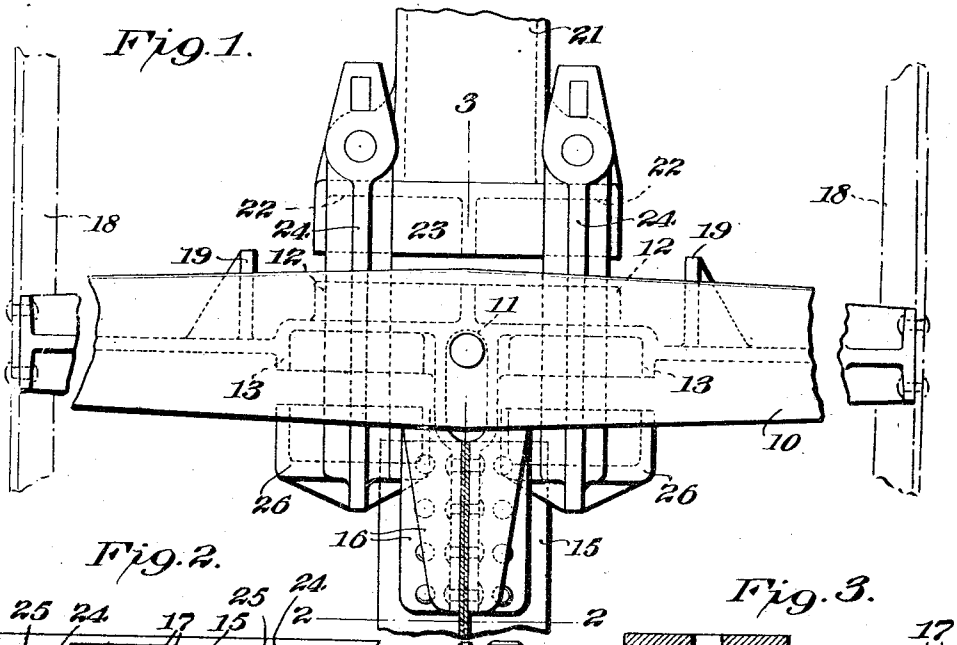


Fig. 2.

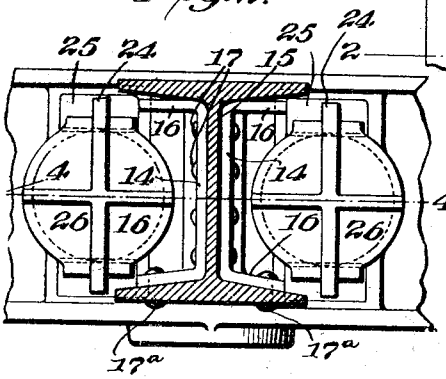


Fig. 3.

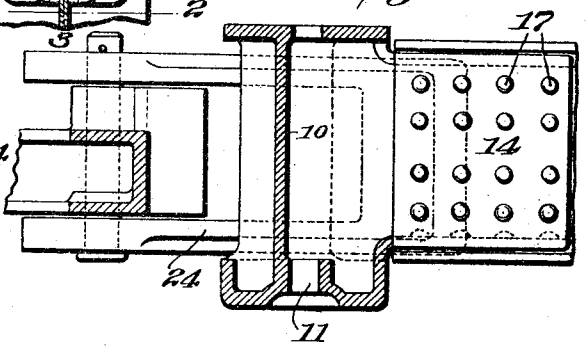
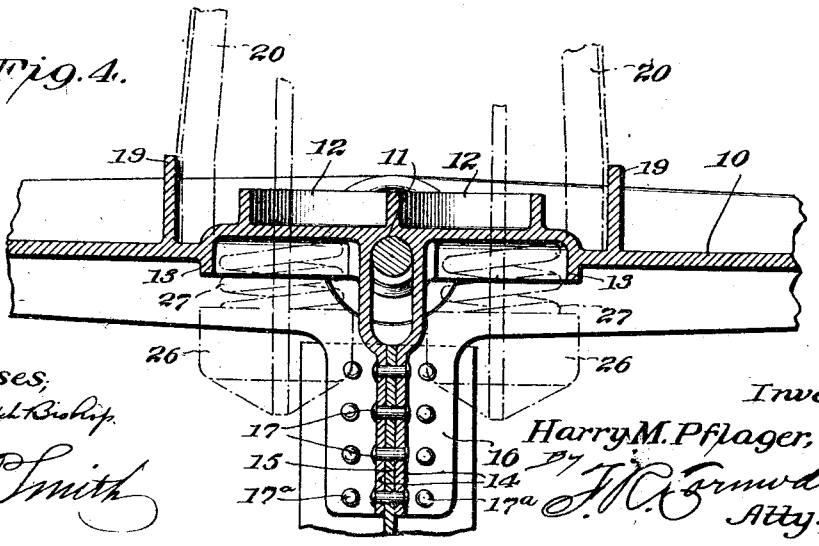


Fig. 4.



Witnesses,

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UNITED STATES PATENT OFFICE.

HARRY M. PFLAGER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO TRANSOM DRAFT GEAR COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF DELAWARE.

RAILWAY-CAR UNDERFRAME.

1,066,840. Specification of Letters Patent. Patented July 8, 1913.

Application filed January 14, 1913. Serial No. 741,996.

To all whom it may concern:

Be it known that I, HARRY M. PFLAGER, a citizen of the United States, residing at city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Railway-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 use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a portion of a railway car underframe of my improved construction, and showing the draft gear associated therewith. Fig. 2 is a sectional view taken approximately on the line 2—2 of Fig. 1, and showing parts of the body bolster and the draft gear in elevation. Fig. 3 is a longitudinal sectional view taken approximately on the line 3—3 of Fig. 1. Fig. 4 is a horizontal section taken approximately on the line 4—4 of Fig. 2 with the draft gear shown in dotted lines.

My invention relates generally to new and useful improvements in metal underframes for railway cars of the type shown in Patents No. 916,586, dated March 30, 1909 and No. 926,074, dated June 22, 1909, both issued to me.

My present invention relates particularly to steel underframes having a single center sill, to the construction and manner of attaching the body bolsters to the ends thereof, and to the draft gear which is operatively associated with the bolsters and ends of the single center sill.

The principal object of my invention is to construct and attach the body bolsters of the underframe to the center sill in such a manner as to form a very strong, rigid and compact structure whereby the stresses of the draft gear are transmitted directly to the bolster and are distributed therefrom to the various parts of the underframe, particularly the single center sill.

In the construction of certain types of steel underframes it is the present practice to use a single center sill of substantially I-beam shape either formed in a single piece or of built-up construction, and it is one of the purposes of my invention to provide and combine with said center sill, a pair of cast metal bolsters, each having a pair of projecting web plates or brackets arranged and adapted to grip the vertical web of the center sill and the ends thereof and to be fixed thereto, and to the flanges of said center sill by means of rivets or like fastening devices.

With the above and other objects in view, my invention consists in certain novel features of construction and arrangement of parts hereinafter more fully described and claimed.

Referring by numerals to the accompanying drawings, 10 designates a bolster which is preferably formed in a single piece by casting and substantially of I-beam shape in cross section. Formed through the center of the bolster is a vertically disposed king-bolt opening 11, and formed on the front side of the vertical web of the bolster is a pair of buffing spring pockets 12. Formed on the rear side of the web of the bolster to the sides of the king pin opening is a pair of draft spring pockets 13. Formed integral with the central portion of the bolster between these pockets is a pair of rearwardly projecting, vertically disposed walls or web plates 14, the same being spaced a sufficient distance apart to accommodate the vertical web of the center sill 15. This center sill is ordinarily in the form of an I-beam, and the top and bottom flanges thereof are engaged by flanges 16 which are formed integral with the upper and lower edges of the web plates 14. Bolsters thus constructed are rigidly fixed to the ends of the center sill, preferably by means of rivets 17 which pass through the vertical webs or plates 14 and the interposed web of the center sill, and also by means of rivets 17ª which pass through a pair of the flanges 16 and the corresponding flanges of said center sill.

The ends of the bolster 10 are attached to the side sills 18 of the underframe in any suitable manner, and secured to brackets 19 which project forwardly from the bolster are the ends of braces or sill members 20 which extend to the end sill of the underframe.

The transom draft gear associated with my improved underframe comprises a drawbar extension 21, in the rear end of which is

formed a pair of buffing spring pockets 22, which, when the draft gear is properly positioned on the underframe, lie immediately in front of the pockets 12, and positioned in said pockets 12 and 22 are the usual buffing springs (not shown).

Connected in any suitable manner to the draw-bar extension 21 are the forward ends of yokes 24 which extend through suitable openings 25 formed in the vertical web of the bolster 10, and formed in the rear ends of these yokes are draft spring pockets 26 which are normally positioned directly behind the pockets 13.

The usual draft springs 27 are positioned in the pockets 13 and 26.

It will be noted that in my improved construction the ends of the center sill are directly connected to the central portions of the bolsters, and thus a very strong, rigid construction is provided wherein all stresses of the transom draft gear are transmitted directly to the bolster and from thence to the longitudinally disposed underframe members, and particularly the single center sill.

In the drawings I have shown the bolster provided with only one pair of plates 14, the same receiving the end of a single center sill, but it will be readily understood that two or more sills may be connected to the body bolster by duplicating the pairs of plates or brackets 14.

It will be readily understood that minor changes in the size, form and construction of the various parts of my improved underframe can be made and substituted for those herein shown and described without departing from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim:

1. In a car underframe, a body bolster cast in a single piece, and a pair of vertically disposed plates formed integral therewith and extending at right angles therefrom, which plates are adapted to receive a portion of one of the sills of the car underframe.

2. In a car underframe having a single center sill, a bolster having a pair of integral, vertically disposed plates adapted to receive the web portion of the center sill, and fastening means seated in said plates and the interposed portion of the center sill.

3. In a car underframe, an I-beam center sill, a bolster, a pair of vertically disposed web plates integral with the bolster and adapted to engage the web of the I-beam center sill, and fastening means seated in said plates and the web of the center sill.

4. In a car underframe, an I-beam center sill, a bolster having a pair of integral brackets adapted to engage the web and flanges of the center sill, and fastening means seated in said plates and the web and flanges of the center sill.

5. In a car underframe, a bolster having a pair of integral plates spaced apart a sufficient distance to receive the web of the underframe center sill.

6. In a car underframe a bolster having a pair of integral plates spaced apart a sufficient distance to receive the web of the underframe center sill, and flanges on said plates, which flanges are adapted to engage the flanges of the center sill.

7. In a car underframe a bolster provided on its front and rear sides with spring pockets, and a pair of web plates integral with said bolster for receiving a part of the underframe center sill.

8. In a car underframe, the combination with an I-beam center sill, of a bolster having projecting portions rigidly fixed to the web and flanges of said center sill, and a transom draft gear operatively associated with said bolster.

9. In a car underframe, a body bolster cast in a single piece and provided with an integral slotted bracket adapted to receive a part of the underframe center sill.

10. In a car underframe, a body bolster cast in a single piece and having an integral bifurcated extension on one side adapted to receive a portion of the underframe center sill.

11. In a car underframe, the combination with a center sill having a centrally arranged web, of a body bolster having a slotted extension adapted to receive the end portion of the web of the center sill.

12. In a car underframe, the combination with a center sill having a centrally arranged web, of a body bolster having a slotted extension adapted to receive the end portion of the web of the center sill, and flanges on said slotted extension adapted to engage parts of the center sill.

13. In a car underframe, the combination with a center sill having a web, of a body bolster and an extension integral therewith, which extension is provided with a slot adapted to receive the end portion of the web of the center sill.

14. In a car underframe, a bolster provided on its front and rear faces with spring pockets, and a slotted extension integral with said bolster for receiving a part of the underframe center sill.

15. In a car underframe, the combination with a center sill having a centrally arranged web, of bolsters arranged at each end of said center sill, slotted extensions integral with the bolster and engaging the web of the center sill, and a transom draft gear operatively associated with each bolster.

16. In a car underframe, the combination with a center sill having a centrally arranged web, of bolsters arranged at each

end of said center sill, slotted extensions integral with the bolster and engaging the web of the center sill, fastening means seated in the slotted extensions and the interposed portions of the web of the center sill, and a transom draft gear operatively associated with each bolster.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 6th day of Jan., 1913.

HARRY M. PFLAGER.

Witnesses:

HAL C. BELLVILLE,

FRED H. BLANKENHORN.