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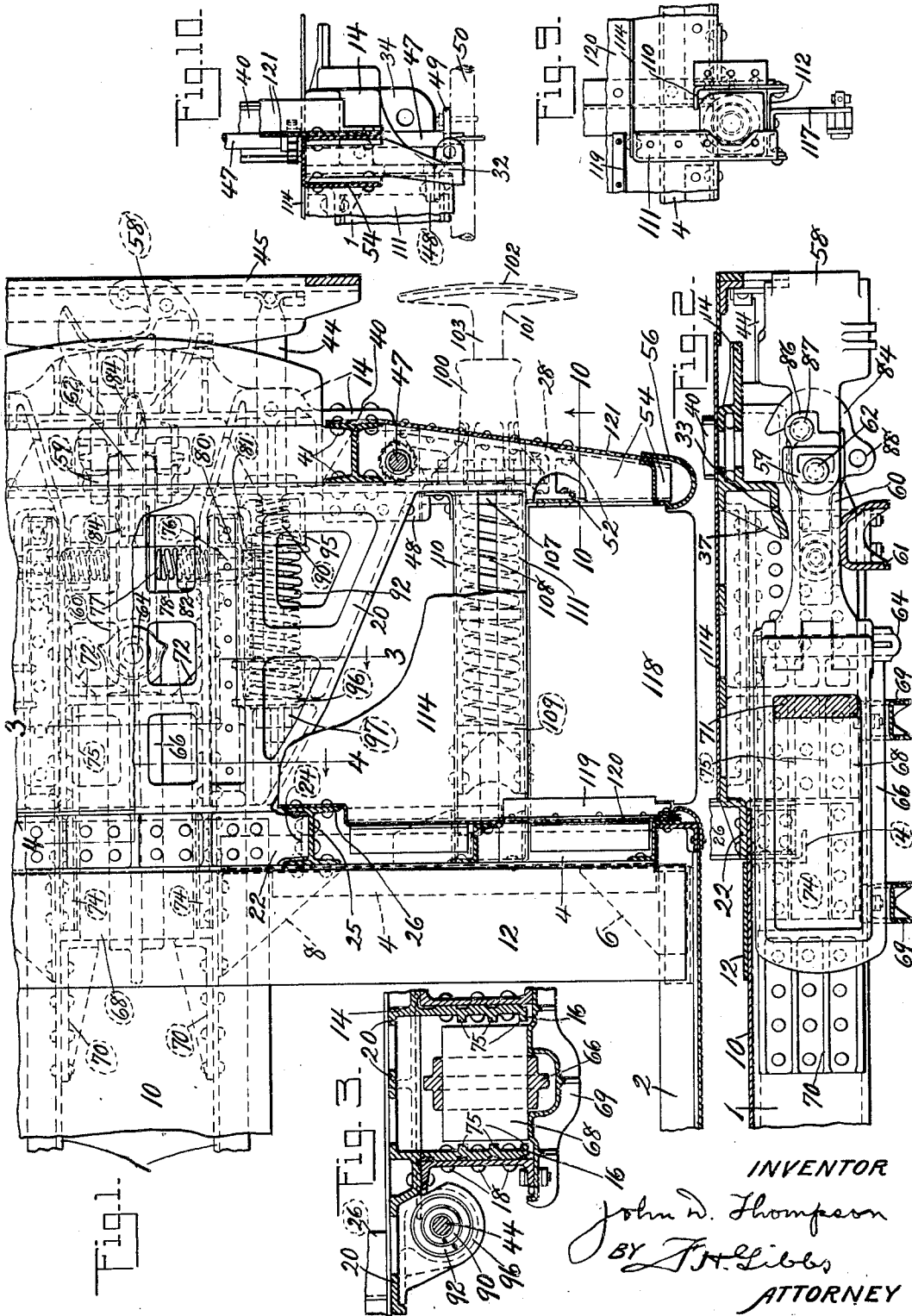
J. D. THOMPSON.

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RAILWAY CAR

Filed June 27, 1928

3 Sheets-Sheet 1



INVENTOR

John D. Thompson

BY F. H. Libbes

ATTORNEY



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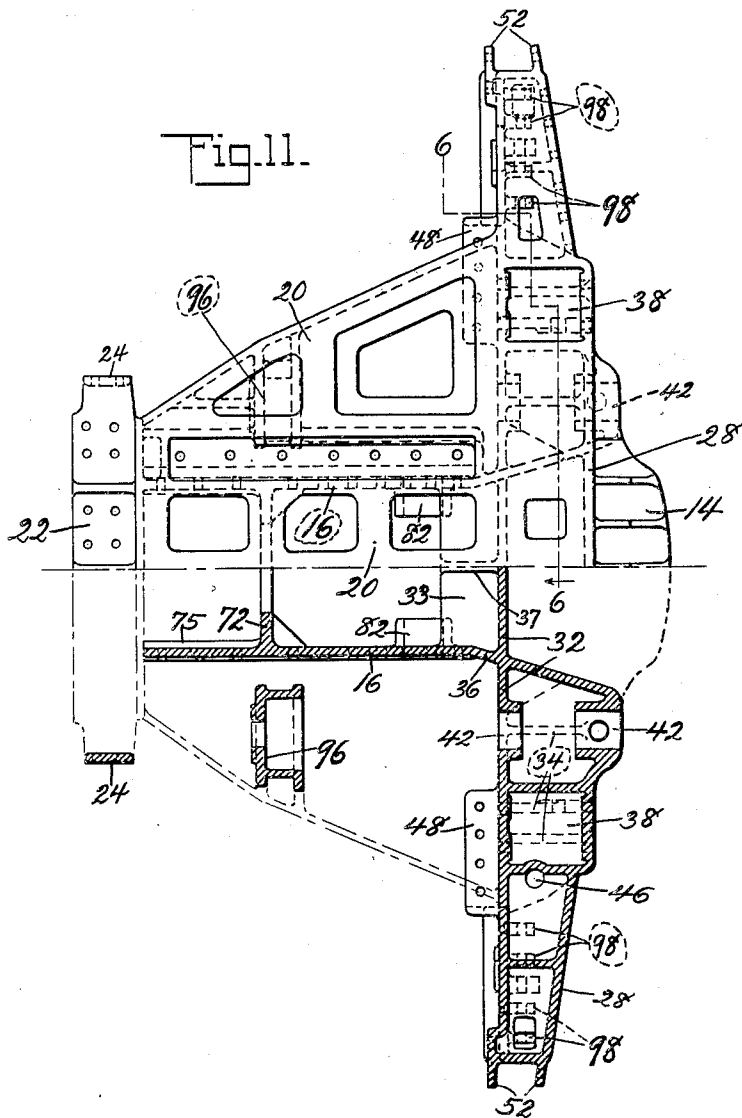
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INVENTOR  
John D. Thompson  
BY F. H. Gibbs  
ATTORNEY

# UNITED STATES PATENT OFFICE.

JOHN D. THOMPSON, OF UNION CITY, NEW JERSEY, ASSIGNOR TO AMERICAN CAR AND FOUNDRY COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## RAILWAY CAR.

Application filed June 27, 1928. Serial No. 288,554.

This invention relates to railway cars and more particularly to the underframe construction at the platforms of railway passenger cars provided with coupler and buffing means permitting the cars to be used in trains with other cars having either the English or American type of coupler and buffing mechanism, and it is an object of this invention to provide a platform casting for cars of the type described which will guide and support coupler and buffing mechanisms in such manner that the change may be readily and quickly made from one type to the other and which will provide suitable supports for the mechanisms not in use. It is also an object of this invention to provide a platform casting of such construction that upon discontinuance of one of the types of coupler and buffing mechanism the car end will still present a satisfactory appearance.

With these and other objects in view, this invention comprises the combinations and constructions shown in the accompanying drawings in which

Figure 1 is a horizontal section of a portion of a passenger car end taken above the car floor of a car having a platform casting constructed in accordance with this invention, some parts being broken away to show other parts more clearly, and the English type buffer being shown in broken lines in operative position;

Fig. 2 is a central vertical longitudinal section of the structure shown in Fig. 1.

Figs. 3 and 4 are partial vertical transverse sections taken on the lines 3—3 and 4—4 of Fig. 1;

Fig. 5 is a partial end elevation of the structure shown in Fig. 1, the outer ends of the drawbar and English type buffer being broken away;

Fig. 6 is in part an end elevation and in part a transverse vertical section on line 6—6 of Fig. 11 of the structure shown in Fig. 1, parts being omitted in order to show the platform casting more clearly;

Fig. 7 is a fragmentary view partly in section taken on line 7—7 of Fig. 5 and showing the American type coupler dropped

to inoperative position on one car and the English type coupler and buffing mechanism in use on a pair of connected cars;

Fig. 8 is a fragmentary sectional view taken on line 7—7 of Fig. 5 and showing the English type buffing mechanism secured in inoperative position and the American type coupler raised to and secured in operative position;

Fig. 9 is a fragmentary view showing the spring resistance for the English type buffing mechanism in front end elevation;

Fig. 10 is a vertical section taken on the line 10—10 of Fig. 1; and

Fig. 11 is a half plan and half horizontal section of the platform casting taken on line 11—11 of Fig. 6.

In the drawings the invention is shown applied to a vestibule passenger car having an underframe comprising spaced channel center sills 1, angle side sills 2 and body end sills 4 of Z-shape which extend between the side sills 2 and center sills 1 and are connected to the sills by pressed gussets 6 and 8, respectively. The center sills 1 extend beyond the body end sills 4 and are placed with their webs vertical and their flanges projecting outwardly and have their upper flanges connected by a top cover plate 10. At the body end sills 4, end sill cover plates 12 extend from side sill to side sill and are connected to the side sills 2, center sills 1, center sill cover plate 10, gussets 6 and to the upper flanges of the body end sills 4.

Mounted between the portions of the center sills 1 which project beyond the body end sills 4 is a platform casting 14. The platform casting 14 comprises spaced sill portions 16 which engage the inner surfaces of the center sill webs from the ends of the center sills to the end sills 4 and are secured thereto by rivets 18. The upper ends of the sill portions 16 are joined by a perforated plate portion 20 which extends beyond the inner ends of the sill portions 16 and is depressed and widened laterally forming a flange 22 which is secured to the center sill cover plate 10 and center sills 1 and which is provided at its ends with downwardly pro-

jecting flanges 24. The flanges 24 are secured to the webs 25 of the body end posts 26 which posts 26 also have flanges attached to the body end sills 4. The plate portion 20 overlies the sills 1 and increases in width from the flange 22 to the other end of the sill portions 16 where it is united with a platform end sill and bumper portion 28 which projects laterally of the plate portion 20.

The platform end sill and bumper portion 28 comprises an upper substantially rectangular part 30 of varying width and different depths and a web or flange 32 which forms a downwardly projecting extension of the rear wall of the rectangular part 30 and which is further united to the rectangular part 30 by reinforcing ribs 34. At the center, the flange 32 is of less depth to provide an opening for a draw bar, but is reinforced by a flange 33 and is connected to the upper part 30 by the diverging ends 36 of the sill portions 16 and ribs 37. At each side of its center the end sill and bumper portion 28 is provided with pockets 38 opening to the top of the portion 28 and in which the vestibule end posts 40 are secured by rivets 41. The portion 28 is also provided with aligned flanged rectangular openings 42 in the front and rear walls thereof in which the rods 44 carrying the buffer 45 are slidably mounted. At one side of its center the portion 28 is provided with aligned openings 46 in its top and bottom walls through which extends a brake mast 47. Projecting inwardly from the lower edge of the web or flange 32 are short flanges 48 to which are secured plates 49 which serve as supports for the train pipes 50 and which on the brake mast side serve also as a step or support for the lower end of the brake mast 47. At its ends the end sill and bumper portion 28 is formed with spaced parallel outwardly projecting vertical flanges 52 to which are secured the inner edges of the flanges of inverted U-shaped members 54 which form extensions of the end sill and bumper portion 28 and to which are connected the vestibule posts 56.

Mounted between the center sills 1 and sill portions 16 of the platform casting 14 is a draft rigging comprising a coupler head 58 of usual American design and having a short shank provided with a forked end 59 which receives and is pivotally connected to outer end of a shank 60 by a horizontally extending pin 62. The shank 60 is supported on a carry iron 61 attached to the center sill bottom flanges and has its other end connected by a vertically extending pin 64 to a coupler yoke 66 which surrounds and cooperates with a suitable resistance means 68. The resistance means 68 is carried upon supports 69 secured to the lower flanges of the center sills and engages with rear stops 70 secured to the center sills 1, and, through a

follower 71, engages with front stops 72 formed integral with the sill portions 16. The resistance means 68 is guided in its movements by guides 74 secured to the center sills 1 and by ribs 75 formed integral with the sill portions 16.

To insure the return of the shank 60 and coupler head 58 to a central position, there are provided centering devices comprising plungers 76 mounted in openings in the sill portions 16 and having heads 77 which engage the shank 60. Confined between the heads 77 and the sill portions 16 are springs 78 which serve to press the plungers outwardly, movement of the plungers being limited by guide and stop brackets 80 engaging nuts 81 threaded on the plungers 76. Annular flanges 82 formed integral with the sill portions 16 and concentric with the openings in which the plungers are mounted form pockets or seats which receive the springs 78 and aid in guiding the movements of the plungers 76.

To provide for the changing from one type of coupler to another, the shank 60 is formed with a recess at its outer end in which is mounted the shank of a hook 84 designed for use with the English type of coupling, the hook 84 being retained in position in the shank 60 by the pin 62. To retain the coupler head 58 in a horizontal position, the head 58 is provided with eyes 86 through which is inserted a pin 87 which engages in the jaws of the hook 84. When the coupler head 58 is dropped to permit of the use of the hook 84, the pin 87 is inserted through the eyes 86 and an eye 88 formed on the hook 84 and the head 58 is kept from swinging.

Inward movement of the buffer 45 is resisted by springs 90 and 92 mounted on the inner cylindrical ends of the rods 44. The springs are confined between spring caps 95 mounted on the rods 44 and in engagement with shoulders on the rods and cylindrical spring seats 96 which are formed integral with and project downwardly from the plate portion 20. Outward movement of the buffer 45 is limited by nuts 97 threaded on the rods 44 engaging with the spring seats 96.

Adjacent each end the web 32 is deepened and at its bottom edge is provided with a plurality of spaced pairs of perforated lugs 98 to which buffer housings 100 are pivotally connected. In the buffer housings 100 are mounted buffers 101 of the English type having heads 102 carried on shanks 103 which extend through the housings 100 and are secured in the housings by the stops or washers 104 fixed on the inner ends of the shanks. The buffers are held in operative or horizontal position by pins which engage in openings in lugs 105 on the housings 100 and lugs 106 on the webs 32. When the housings 100 are held in operative position the inner

ends of the buffer shanks 103 extend through openings 106<sup>A</sup> in the web 32 and engage with followers 107 of spring resistance means 108. The spring resistance means 108 are shown as comprising a plurality of alined springs confined between the follower 107 and a spring stop 109. The spring stop 109 is carried by pressed angles 110 and partial diaphragms 111 which extend between and are secured to the end sill 4 and the end sill and bumper portion 28 of the casting 14. The members 110 and 111 are of different heights and have their horizontal flanges directed inwardly, the horizontal flange of angle 110 projecting over the springs and followers and serving to retain the springs in position on the channel 112 attached to the bottom edges of the vertical flanges of the members 110 and 111 while the horizontal flange of the member 111 serves as a support for a floor plate 114 and the web of the member 111 serves as a riser for the steps 115. When the buffers 101 and housings 100 are dropped to their inoperative positions they are kept from swinging by pins engaging in openings in the lugs 116 on the buffer housings 100 and in brackets 117 attached to the channels 112.

The vestibules are provided with the usual trap doors 118 hinged to an angle 119 attached to the body end and both the body end and the vestibule are provided with sheathing 120 and 121, respectively, in the usual manner.

While the preferred form of the invention has been shown and described, 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.

What is claimed is:

1. In a railway car, a casting having draft and platform end sill portions, a flange for connection to the body end sill and a plate portion connecting said flange and sill portions and increasing in width from said flange to said platform end sill portion.

2. In a railway car, a casting having draft and platform end sill portions, a flange for connection to the body frame, a plate portion connecting said flange and sill portions and increasing in width from said flange to said platform end sill portion and spring seats depending from said plate portion.

3. In a railway car, a casting having draft and platform end sill portions, a flange for connection to the body frame, a plate portion connecting said flange and sill portions and spring seats projecting from said plate and draft sill portions.

4. In a railway car, a casting having draft and platform end sill portions and a plate connected to the draft sill portions in overlying relation so as to extend laterally of

the draft sill portion, the laterally extending portions of the plate portion being connected to the platform end sill portion.

5. In a railway car, a casting having draft and platform end sill portions and a plate connected to the draft sill portions in overlying relation so as to extend laterally of the draft sill portion, the laterally extending portions of the plate portion being connected to the platform end sill portion, said plate portion being of increasing width in the directions of the platform end sill portions.

6. In a railway car, a casting having draft and platform end sill portions, a plate portion connecting said sill portions and buffer attaching lugs on said end sill portion.

7. In a railway car, a platform end sill casting having a brake mast step supporting flange.

8. In a railway car, a platform end sill casting having flanges for supporting an extension thereof.

9. In a railway car, a platform end sill casting having spaced parallel flanges for supporting a platform end sill member.

10. In a railway car having center sills, a platform casting connected to said center sills and having draft and platform end sill portions, buffing means slidably mounted on said platform casting and buffing means pivotally connected to said end sill portion.

11. In a railway car having center sills, a platform casting connected to said center sills, said casting having draft and platform end sill portions and a plate portion connecting said sill portions, buffing means slidably mounted in said end sill portion, springs for said buffing means, seats for said springs formed integral with said plate portion and buffing means pivotally connected to said end sill portion.

12. In a railway car, an integral platform end sill comprising a substantially rectangular portion having its rear wall extended to form a downwardly projecting flange which extends for substantially the length of the end sill.

13. In a railway car, an integral platform end sill comprising a substantially rectangular portion having its rear wall extended to form a downwardly projecting flange which extends for substantially the length of the end sill and aligned flanged openings in its front and rear walls for slidably mounting a buffer mechanism therein.

14. In a railway car, an integral platform end sill comprising a substantially rectangular portion having its rear wall extended to form a downwardly projecting flange and buffing means pivotally mounted on said flange.

15. In a railway car, having a body end sill, an integral platform end sill comprising a substantially rectangular portion having its rear wall extended to form a flange,

buffing means pivotally mounted on said flange and resistance means for said buffing means carried by said body end sill and flange.

5 16. In a railway car having a body end sill, a platform end sill, and steps between said end sills, buffing means carried by said platform end sill, resistance means for said buffing means and supporting means for said  
10 resistance means forming a riser for said steps.

17. In a railway car having center sills, a platform casting connected to said sills, and having draft sill portions, and convertible  
15 draft means mounted in said draft sills comprising a shank, relatively fixed and movable heads arranged in operative position on said shank, and means for rendering either of the heads effective.

20 In witness whereof I have hereunto set my hand.

JOHN D. THOMPSON.