Jan. 8, 1935. H. W. STERTZBACH 1,987,134

BODY BOLSTER CONSTRUCTION

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Fig. 1.

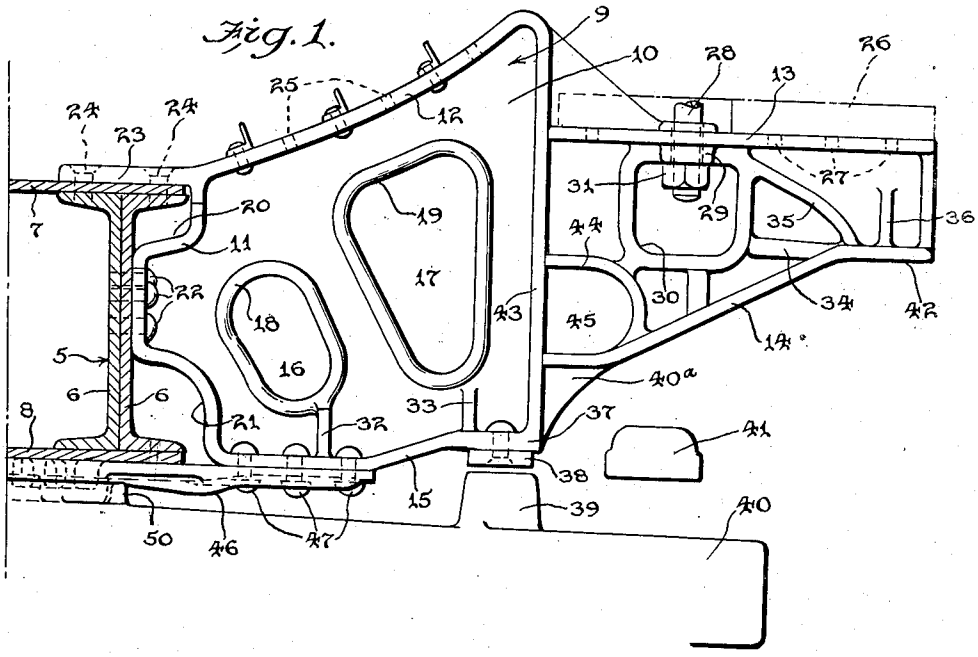
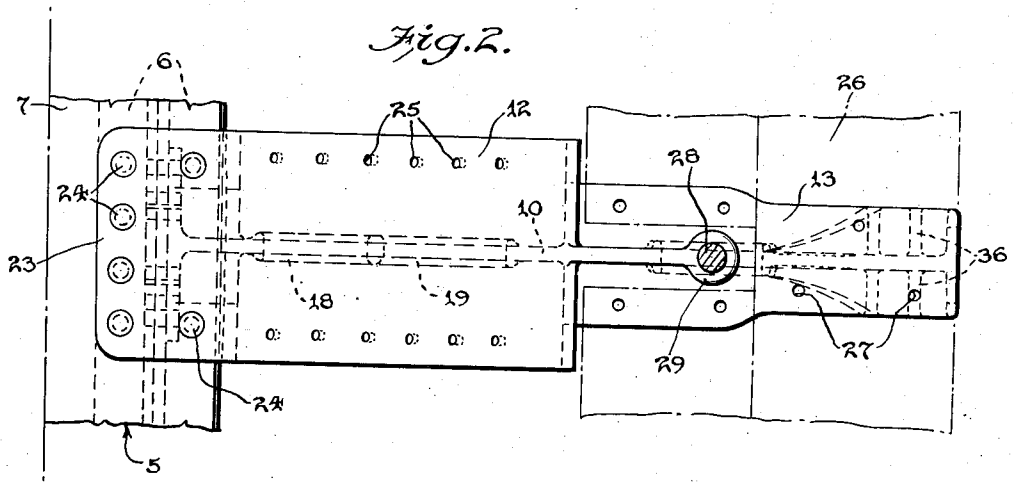


Fig. 2.



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Fig. 3.

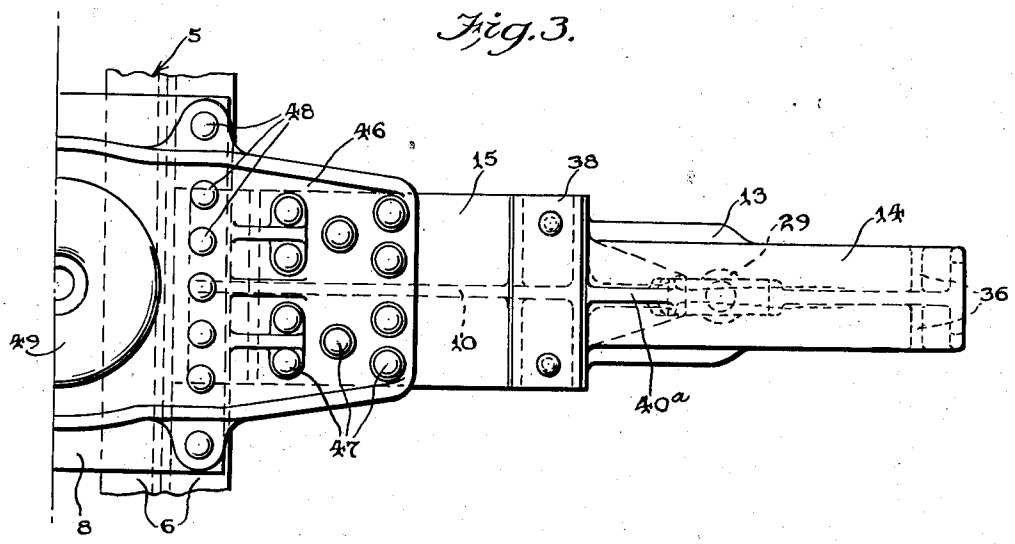
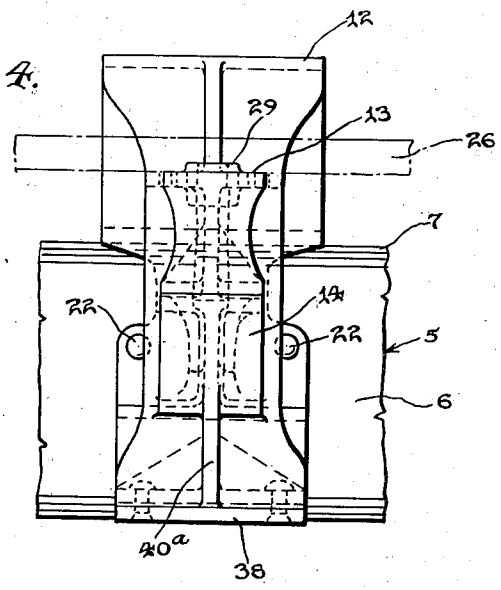


Fig. 4.



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UNITED STATES PATENT OFFICE

1,987,134

BODY BOLSTER CONSTRUCTION

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Application October 21, 1931, Serial No. 570,234

2 Claims. (Cl. 105—228)

This invention relates to improvements in body bolsters for railway tank cars, and the like. Such body bolster construction is used to support the tank of the car, and this is its principal function. However, in accordance with my invention, other features have been combined in this bolster to increase its usefulness, and some time ago my improved construction was used to replace a built-up body bolster arrangement which had failed on tank cars in service, and the improved bolster has been tested in service and found practical and very satisfactory.

Some of the objects of the invention are:

(1) To provide a body bolster bracket for supporting the tank of a tank car and means for rigidly connecting same to the center sill.

(2) A tie plate rigidly connecting the bottoms of the body bolster brackets and the center sill and provided with an integral body center plate.

(3) A one piece body bolster bracket with integral side bearing, push pole pocket, tank band anchor, walk support, and a surface clear of the running gear of the car for raising and supporting the car underframe and tank.

With the foregoing objects outlined and with other objects in view which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

Only one-half of the body bolster has been illustrated to facilitate the showing of the same.

Referring to the drawings,

Fig. 1 is an elevation of one-half of the bolster, and showing its relation to the bolster of a car truck and the side frame of such truck.

Fig. 2 is a top plan view of the same.

Fig. 3 is a bottom plan view.

Fig. 4 is an end view.

It will be noted in the drawings that the center sills 5 may be of conventional construction, or a reinforced construction as shown, formed of channel irons 6 connected at the top by means of a top plate 7 and at the bottom by a plate 8.

In accordance with my invention, I arrange at each side of the sill, a bracket 9 preferably consisting of a single metal casting having a center web 10 from which projects oppositely extending flanges 11, 12, 13, 14 and 15. The web may be apertured as shown at 16 and 17 to reduce weight, and beads 18 and 19 surround these apertures for strengthening the structure.

Recesses 20 and 21 are formed by the flange 11 to accommodate the outwardly extending flanges of the center sills, and the flange 11 is secured to one of the center sills by any suitable means such as rivets 22.

For increasing the strength of the structure, the bracket has another projecting flange 23 extending over a portion of the plate 7, so that the flange 23, plate 7 and the center sill may be rigidly connected by rivets or the like 24.

In order that the flange 12 may conform to the surface of the tank, such flange is of arcuate shape, and the usual boards (not shown) that are arranged between the body bolster and the tank, may be secured to this flange by bolts or the like, which pass through the holes 25 of the flange.

A walk 26 may be supported by the flange 13, and the latter has apertures 27 to accommodate bolts or the like employed to secure the walk in position.

One end of a tank strap is shown at 28, and this is anchored by passing through a sleeve 29 integral with the flange 13. A hole 30 in the web of the bracket permits manipulation of the nut 31 that anchors the strap in position.

Reinforcing ribs 32, 33, 34, 35 and 36 strengthen the flanges 15 and 14, and the former provides a side bearing 37 which is riveted to a wearing plate 38 that cooperates with the side bearing 39 of a truck bolster 40, which may be of conventional design. Another rib 40*a* joins the parts 14 and 37 and reinforces the bracket.

A portion of the truck side frame is shown at 41, and it will be observed that the flange 14 is shaped to clear the side frame. Furthermore, the flange 14 projects outwardly beyond the side frame and truck bolster to provide a bearing surface 42 which is clear of the running gear of the car for use in raising and supporting the car underframe and tank.

Flanges 43 and 44 cooperate with the flange 14 and the web to provide a push pole pocket 45.

I preferably combine with this improved form of bracket, a tie plate 46 that is rigidly connected to the bottoms of the body bolster brackets by rivets 47, and to the bottoms of the center sills by rivets 48. Between the lines of rivets 48, the tie plate has an integral body center plate 49 which cooperates in the usual way with the center plate 50 of the truck.

While the drawings show the invention applied to a tank car, manifestly, modifications may be made so that the same invention may be used on other types of cars.

From the foregoing it is believed that the construction, use and advantages of the invention may be readily understood, and I am aware that

changes may be made in the details disclosed, without departing from the spirit of the invention, as expressed in the claims.

What I claim and desire to secure by Letters Patent is:

1. In a railway car, center sills having outwardly projecting upper and lower flanges, a car body bolster including a bracket forming substantially one-half of the bolster and consisting of a single metal casting, said casting comprising a vertical web from which projects oppositely extending flanges, said flanges forming upper and lower recesses into which flanges of the sills project and said recesses being larger than the last mentioned flanges to provide spaces between the last mentioned flanges and the flanges of the bracket, said bracket having a portion extending over the top of one of said sills and secured to the upper flange of the latter, and means connecting the lower portion of the bracket to the lower flange of the last mentioned sill.

2. In a railway car, center sills, a car body bolster including brackets arranged at opposite sides of the center sills, each bracket forming substantially one-half of the bolster and consisting of a single metal casting, said casting comprising a vertical web from which projects oppositely extending flanges, each bracket having an integral outwardly extending portion, a walk directly supported by said outwardly extending portion, the under surface of said portion forming means integral with the bracket to facilitate the raising and supporting of the car underframe, each bracket being directly secured to the top and side of one center sill, and a plate extending under the center sills and having its ends rigidly secured to the lower portions of said brackets.

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