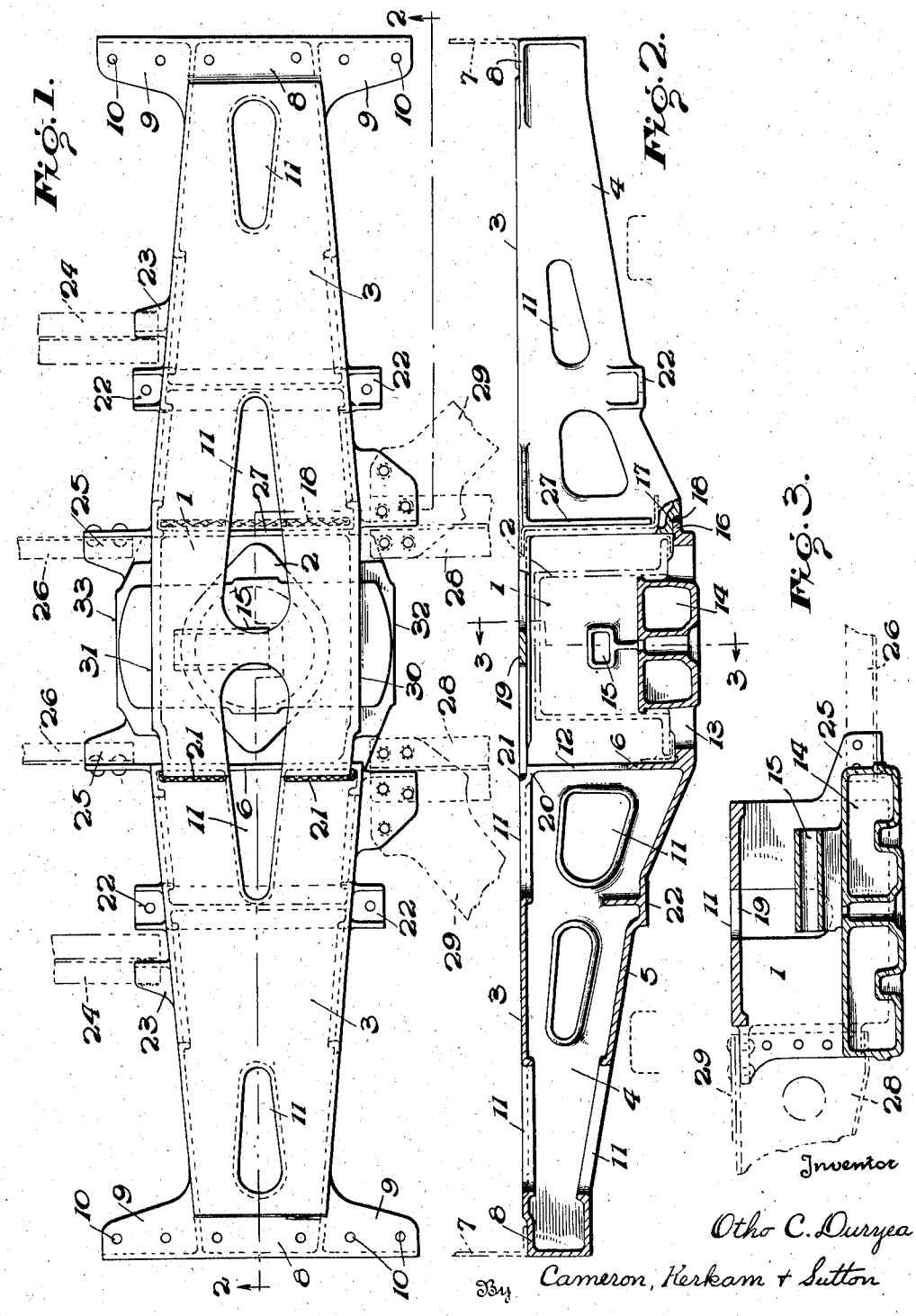
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CAR CONSTRUCTION

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CAR CONSTRUCTION

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This invention relates to body bolster construction for railway cars having underframes of the Duryea type wherein a longitudinally movable draft and buffing column passes slidably through an opening or openings in the bolster.

Various types of both riveted and cast bolster constructions have been proposed and used heretofore in Duryea underframes with good results. Cast bolsters, however, have heretofore required undesirably large castings and have involved difficulties in assembling the underframe inasmuch as it has been necessary to push the bolster casting onto the end of the draft and buffing column and to move it along the column to the proper place.

One of the objects of the present invention is to provide novel bolster construction for use in Duryea underframes which is economical to manufacture, strong and rigid in construction and safe and reliable in service. Other objects are to enable the use of cast bolster construction in Duryea underframes while reducing the size of the castings and facilitating the assembly of the bolster with the draft and buffing column and other parts of the underframe. Still further objects will appear hereinafter as the description of the invention proceeds.

One embodiment of the invention has been illustrated in the accompanying drawing but it is to be expressly understood that said drawing is for purposes of illustration only and is not to be construed as a definition of the limits of the invention, reference being had to the appended claims for this purpose.

In the drawing,

Fig. 1 is a plan view of bolster construction embodying the invention;

Fig. 2 is a side view of said bolster construction, partly in section, on the line 2—2 of Fig. 1; and

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

As shown in Fig. 2, the bolster is provided with a central opening 1 for the passage of a suitable draft and buffing column which is indicated in dotted lines at 2. The bolster comprises two castings each of which provides the complete bolster structure from one side of said opening to the adjacent side of the car, said castings being provided with extensions that form the top and bottom of the bolster above and below the opening 1. These castings abut each other along two weld lines, one at the top of the bolster and one at the bottom of the bolster, which extend longitudinally of the car adjacent its center line and are preferably spaced laterally so that they are not directly above one another. When assembled the two castings are welded together along these lines to form the complete bolster.

The construction of the bolster from the sides of the opening to the sides of the car is preferably the same on both sides of the car and may have any suitable form. As shown this structure comprises a hollow casting of substantially rectangular cross section which decreases in vertical extent toward the side of the car. The castings comprise top walls 3, side walls 4 and inclined bottom walls 5, the inner ends of the castings having vertical end walls 6 which define the sides of the opening 1. At their outer ends said castings are shaped to receive the side sills 7 of the car, comprising for this purpose end surfaces 8 extended by flanges 9 to which the side sills 7 can be secured in any suitable manner as indicated by the rivet holes 10. Openings 11 may be provided in the walls of the castings of any suitable size, number and arrangement to facilitate the casting operation, and in each casting one of these openings is preferably located in the top wall 3 adjacent the center of the car and adjacent an opening 12 in the end wall 6 so as to facilitate access to the interior of the bolster opening 1 from the top of the bolster. It will be understood that the particular details of form and construction of the castings can be varied as desired.

The left-hand casting as seen in the drawing comprises an extension 13 which passes under the opening 1 and forms the bottom of the bolster, this extension being shaped as shown in Figs. 2 and 3 to support the draft and buffing column and to provide a hollow beam construction 14 which is adapted to rest on the car trucks and to carry the weight of the car body and lading. Said beam construction 14 may also comprise a suitable abutment 15 adapted to cooperate with cushioning means of any suitable type for resisting relative movement between the draft and buffing column 2 and the bolster. The right-hand edge of the extension 13 comprises a projecting rib 16 which is received in a suitable recess 17 in the right-hand casting, these parts being welded together as shown at 18 throughout the entire longitudinal extent of the bolster.

The right-hand casting as seen in the drawing also comprises an extension 19 which extends over the opening 1 and forms the top of the bolster, said extension 19 preferably comprising an extension of the top wall 3 of the casting. The left-hand edge of the extension 19 is received in a suitably shaped recess 20 of the left-hand

casting and these parts are welded together at 21 throughout the longitudinal extent of the bolster except where the surfaces are interrupted by the opening 11. Preferably and as shown in Fig. 1 these top openings 11 adjacent the center of the car are extended toward the center of the car over the bolster opening 1, being formed partly in the extension 19.

It will be understood that the bolster construction described above can be suitably formed to cooperate with the remaining parts of the car underframe. For example, each of the castings may be provided with a suitable side bearing 22 and with a suitable lug 23 for the attachment of floor supports shown in dotted lines at 24. Each of said castings may also comprise a suitable lug 25 at the inner side of the bolster for the attachment of suitable tie angles 26 shown in dotted lines. At the outer side of the bolster each of said castings may also be provided with L-shaped projecting walls 27 to facilitate the connection to the bolster of torque arms 28 and diagonal braces 29 both of which are shown in dotted lines. The outer and inner edges 30 and 31 respectively of the extension 19, as well as the outer and inner edges 32 and 33 respectively of the extension 13, are adapted to form over-solid stops to limit the movement of the draft and buffing column 2 relative to the bolster.

It will be seen that the construction above described permits the use of cast bolster construction while reducing the size of the castings and facilitating the assembly of the bolster with the draft and buffing column and the other parts of the underframe. The two castings may readily be assembled around the draft and buffing column and easily secured together by welding along the lines 18 and 21 as described above. This eliminates the difficulty heretofore involved in handling the complete bolster casting during assembly of the underframe as well as the necessity of pushing the bolster onto the end of the draft and buffing column, reduces the amount of plant space required and permits truck bolster flasks and molding up equipment to be used.

While only one embodiment of the invention has been described and illustrated in the drawing it is to be expressly understood that the invention is not limited thereto but is capable of various mechanical embodiments which will be apparent to those skilled in the art, and that various changes may be made in the form, details of construction and arrangement of the parts without departing from the spirit of the invention. Reference is therefore to be had to the appended claims for a definition of the limits of the invention.

What is claimed is:

1. A railway car body bolster of the type having a substantially central opening for the passage of a draft and buffing column and comprising two integral structures extending respectively from opposite sides of said opening to the adjacent sides of the car, said structures having portions extending above and below said opening with the ends of said extending portions abutting the other structure along lines transverse to the bolster at its top and bottom and adjacent the center line of the car, said structures being welded together along said lines.

2. A railway car body bolster of the type having a substantially central opening for the passage of a draft and buffing column and comprising two integral structures extending respectively from opposite sides of said opening to the adjacent sides of the car, one of said structures having an extension forming the bottom of the bolster underneath said opening and the other structure having an extension forming the top of the bolster above said opening, the end of each of said extensions abutting and being welded to the other structure along a line transverse to the bolster.

3. A railway car body bolster of the type having a substantially central opening for the passage of a draft and buffing column and comprising two castings each providing the complete bolster structure from one side of said opening to the adjacent side of the car, said castings having extensions above and below said opening to form the top and bottom of the bolster and each extension abutting and being welded to the other casting with the weld lines extending longitudinally of the car at the top and bottom of the bolster but spaced from one another transversely of the car.

4. A railway car body bolster of the type having a substantially central opening for the passage of a draft and buffing column and comprising two castings each providing the complete bolster structure from one side of said opening to the adjacent side of the car, one of said castings having an extension forming the top of the bolster above said opening and being welded at its end to the other casting, said other casting having an extension forming the bottom of the bolster under said opening and being welded at its end to said one casting, whereby the weld lines are disposed diagonally with respect to said opening.

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