June 21, 1949. K. R. HAMMERSTROM 2,473,946

DOUBLE TRUCK MINE CAR BODY

Filed May 12, 1945 3 Sheets-Sheet 1

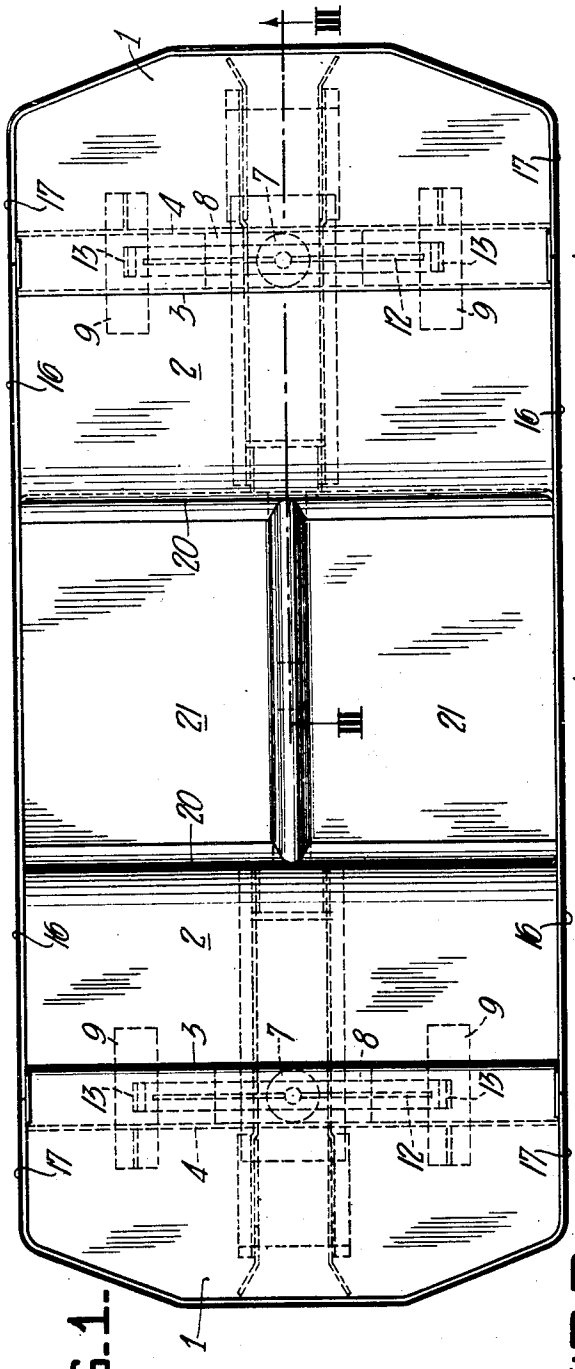


FIG. 1.

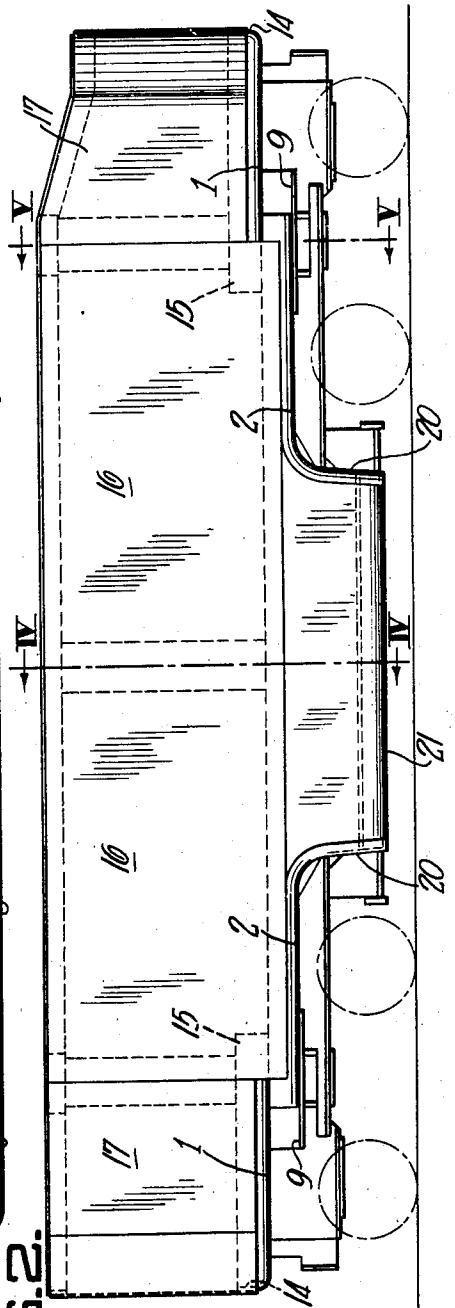


FIG. 2.

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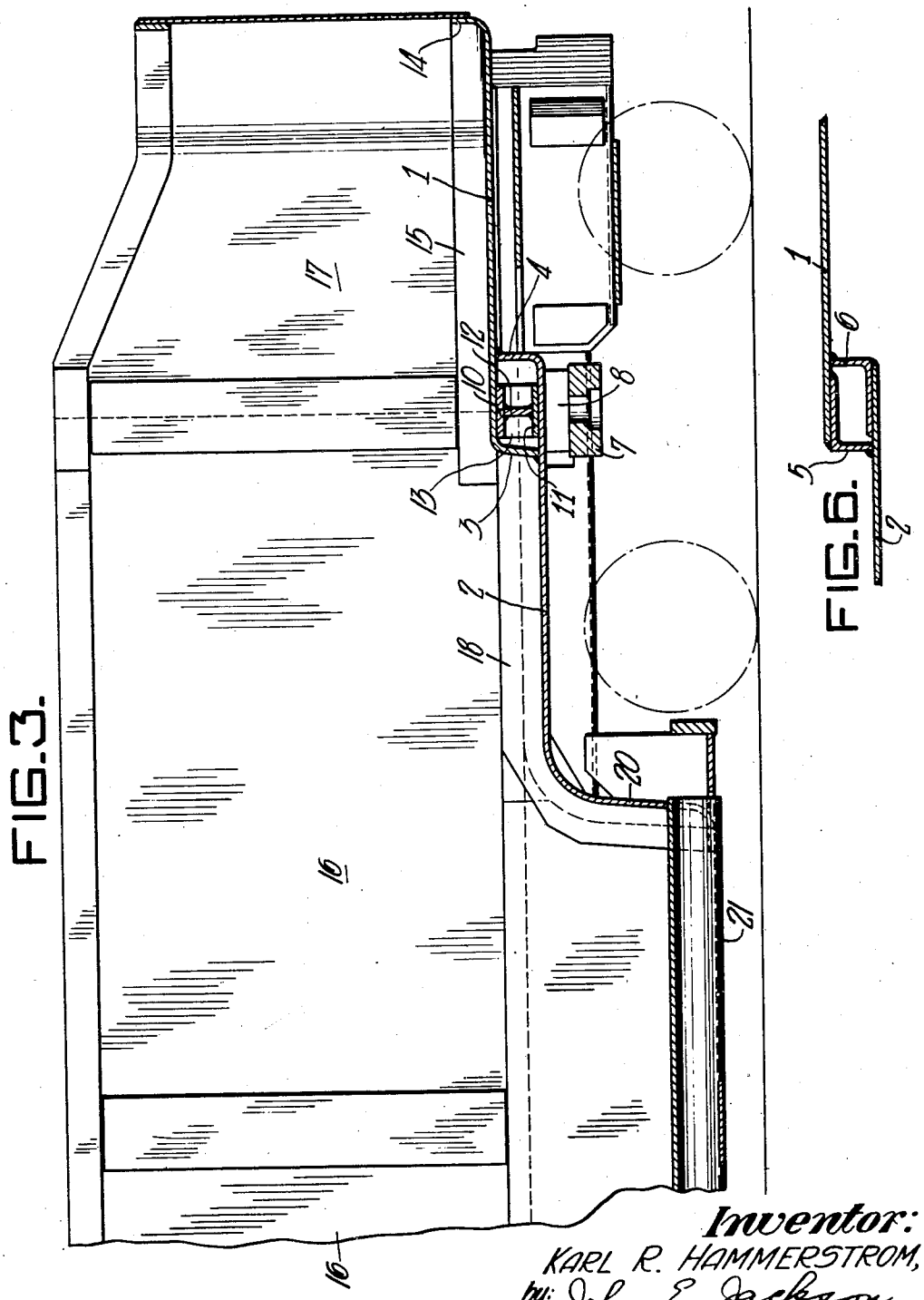


FIG. 3.

FIG. 6.

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FIG. 4.

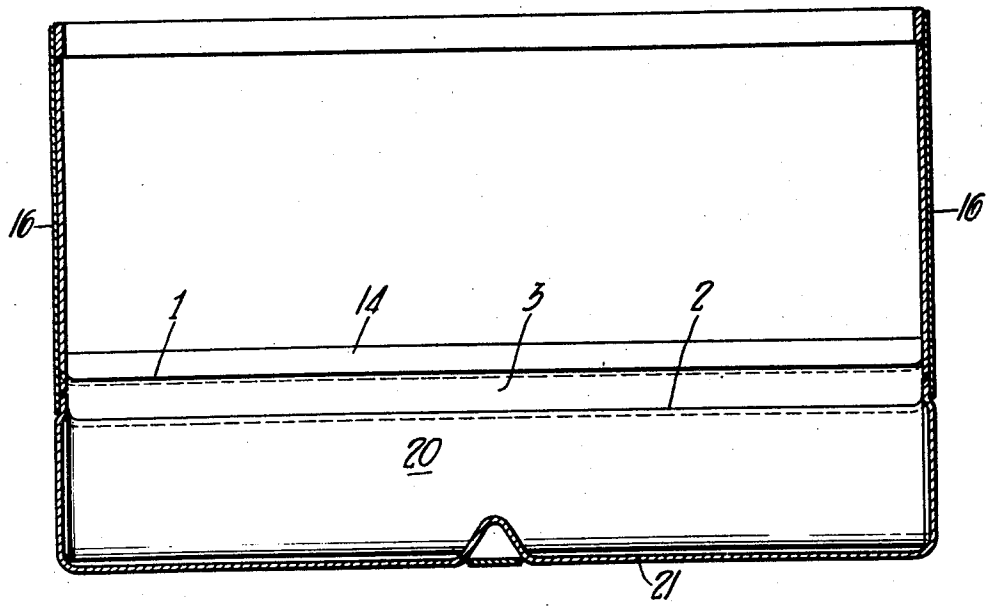
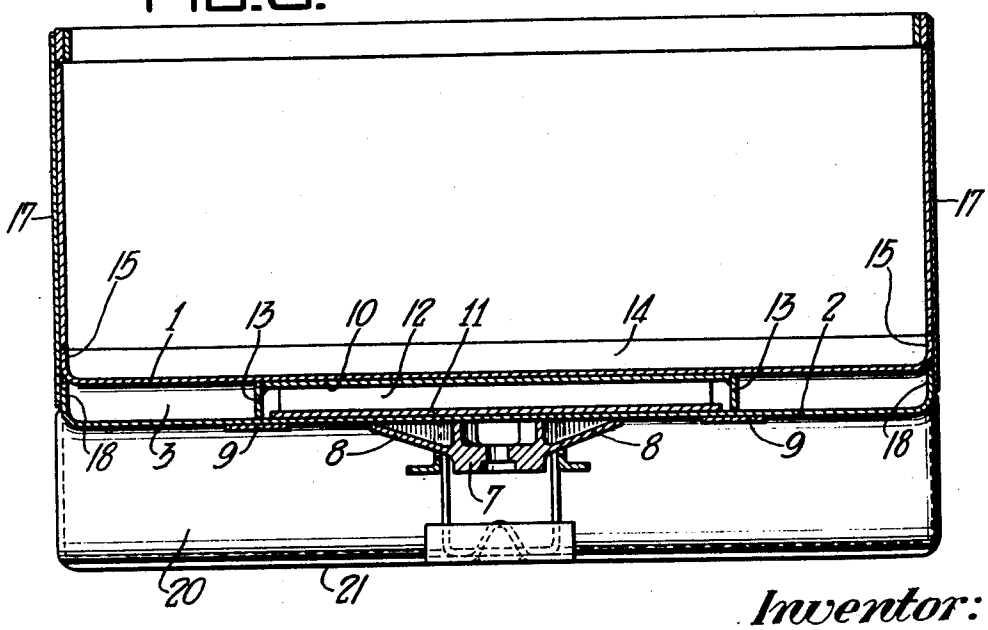


FIG. 5.



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UNITED STATES PATENT OFFICE

2,473,946

DOUBLE TRUCK MINE CAR BODY

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Application May 12, 1945, Serial No. 593,407

7 Claims. (Cl. 105—414)

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This invention relates to mine railway cars of the truck mine car type having pivoted four-wheel trucks at either end of the car, the object being to provide the body of such a car with body bolsters that are flush with the end floors and thus avoiding any pockets or obstructions which would trap lading in the body ends.

Specific examples of the invention are illustrated by the accompanying drawings, in which:

Figure 1 is a plan;

Figure 2 is an elevation;

Figure 3 is a longitudinal section from the line III—III in Figure 1;

Figures 4 and 5 are cross sections from the lines IV—IV and V—V in Figure 2; and

Figure 6 is a modification of the invention.

More specifically, these drawings show a truck mine car body having, at either end, a box section body bolster with its webs formed by arranging the mutually adjacent end portions of the body's end and intermediate floor plates, 1 and 2 respectively, in overlapped and vertically offset relation with the end floor plate 1 over or above the intermediate floor plate 2 and with the flange of this box section body bolster formed by flanges 3 and 4 joining the two floor plates 1 and 2 with each other. The flange 3 is formed by bending down a portion of the overlapped end portion of the end floor plate 1 and joining it with the opposing upper face of the intermediate floor plate 2, and the flange 4 is formed by bending up a portion of the overlapped end portion of the intermediate floor plate 2 and joining it with the opposing bottom face of the end floor plate 1.

A modified way of providing the flanges 3 and 4 is shown by Figure 6 and is by using angle bars 5 and 6 arranged parallel to each other in box-section-like manner with their legs forming the box-section-like webs arranged flatly against the overlapped end portions of the floor plates 1 and 2 and joined thereto, and with their legs forming the box-section-like flanges arranged respectively about flush with the ends of the overlapped end portions of the floor plates 1 and 2 and joined thereto and to the opposing faces of these end portions to form the flanges 3 and 4.

A body center bearing 7 is joined to the bottom of the intermediate floor plate 2 beneath the described box section bolster so as to receive the body loading from the bolster, and this center plate has arms 8 flaring toward the bolster ends providing increased depth to the bolster at its central portion, thus providing means to keep the floor height to a minimum and bending stresses in the bolster relatively uniform throughout.

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Body side bearings 9 are also joined with the bottom of the floor plate 2 intermediate the body center bearing and the ends of the box section bolster.

The box section body bolster internally has longitudinal stiffeners extending from one of its side bearing portions to the other, these portions being those above the side bearings 9. These stiffeners are in the form of plates 10 and 11 joined flatly to the insides of the webs of the bolster, and a vertical plate 12 running along the bolster center line and joined with the bottom faces of the plate 10 and having its ends terminating just a little short of the side bearing portions, along with vertical transverse plates 13 in line with the side bearing portions and joined with the plate 10. The plate 11 is a little longer than the plate 12 and extends more closely to the side bearing portions, while the plate 10 is long enough so that it may be joined to the inner sides of the transverse plates 13.

The end portion of the end floor plate 1 away from the flange 3 and at the car end is bent to form an upstanding end flange 14, and its side portions are bent to form upstanding side flanges 15, these flanges 14 and 15 being joined to the body end sheet 17 and to the body side sheets 16. The intermediate floor plate 2 has both its side portions and its end portion away from its end providing the flange 4, bent upwardly to provide side flanges 18 to which the body side sheets 16 are joined, and an end flange 20 to which the center floor plate 21 is joined.

The end floor plate 1 and its various flanges is a single piece of pressed steel plate, the same applying to the floor plate 2 and its various flanges.

In instances where the plates are bent the bending should be done to provide well rounded corners preventing the accumulation of the car lading as much as possible. The various parts are preferably made of steel plates or sheets, excepting the body center bearing which is a casting, and the joining of these parts is preferably done by welding.

I claim:

1. A truck mine car body having a box section body bolster with its webs formed by arranging the mutually adjacent ends portions of the body's end and intermediate floor plates in overlapped and vertically offset relation with the end floor plate over the intermediate floor plate, and with its flanges formed by angle bars arranged parallelly in box-section-like manner with their legs forming the box-section-like webs arranged

flatly against the overlapped end portions of said floor plates and joined therewith and with their legs forming the box-section-like flanges arranged respectively about flush with the ends of the overlapped end portions of said floor plates and joined therewith and with the opposing faces of these end portions.

2. A truck mine car body having a box section body bolster with its webs formed by arranging the mutually adjacent end portions of the body's end and intermediate floor plates in overlapped and vertically offset relation with the end floor plate over the intermediate floor plate, and with its flanges formed by flanges joining said floor plates with each other, said bolster internally having longitudinal stiffeners extending from one of its side bearing portions to the other.

3. A truck mine car body having a box section body bolster with its webs formed by arranging the mutually adjacent end portions of the body's end and intermediate floor plates in overlapped and vertically offset relation with the end floor plate over the intermediate floor plate, and with its flanges formed by flanges joining said floor plates with each other, said bolster internally having longitudinal stiffeners extending from one of its side bearing portions to the other one thereof in the form of plates extending longitudinally of said section and joined flatly to the insides of its webs and a vertical plate running along its center line and joined with the bottom face of the upper one of said plates, along with vertical transverse plates in line with the side bearing portions and joined with the upper one of said plates.

4. A truck mine car body having a box section body bolster with its webs formed by arranging the mutually adjacent end portions of the body's end and intermediate floor plates in overlapped and vertically offset relation with the

end floor plate over the intermediate floor plate, and with its flanges formed by flanges joining said floor plates with each other, said body having a depending truck center plate receiving body loading from the bolster and which has arms flaring toward the bolster ends providing an increased depth of bolster at the higher stressed portions adjacent the center plate.

5. In a mine car body having an intermediate floor plate and a pair of end floor plates joined to opposite ends of said intermediate floor plates and being at levels thereabove, bolsters at the regions of joining of the end floor plates to the intermediate floor plate and extending continuously from side to side of the car, said bolsters being of box-like configuration and including top and bottom webs and flanges joining said webs, said top webs being integral extensions of said end floor plates and said bottom webs being integral extensions of said intermediate floor plate.

6. In a mine car body as defined in claim 5, the top and bottom bolster webs being respectively at the same levels as the end and intermediate floor plates.

7. In a mine car as defined in claim 5, the bolster webs being horizontally disposed and the bolster flanges being vertically disposed, the flanges being integral extensions of the webs in planes normal thereto.

KARL R. HAMMERSTROM.

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The following references are of record in the file of this patent:

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