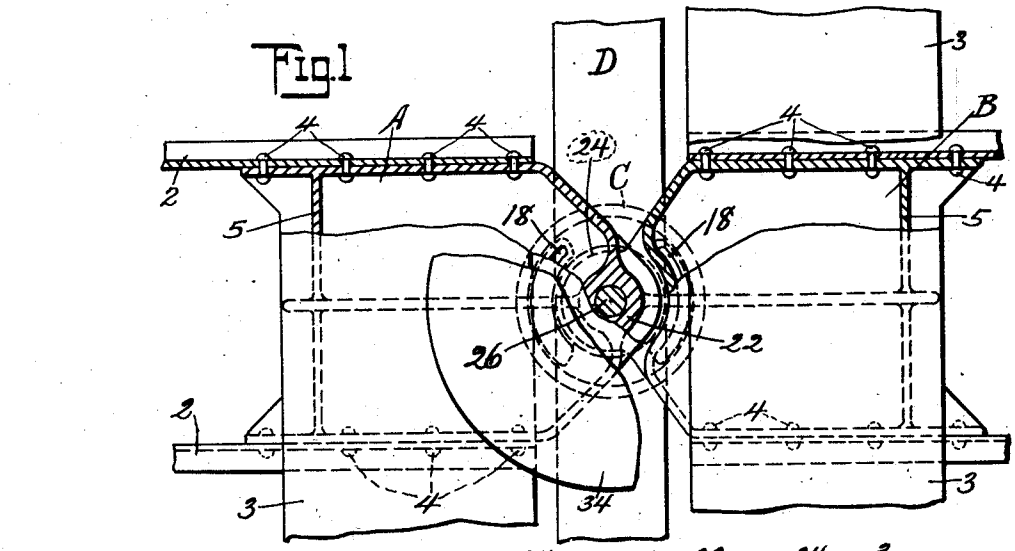
March 29, 1932. W. GRIFFIN 1,851,702

ARTICULATED CAR

Filed June 15, 1931

Fig.1



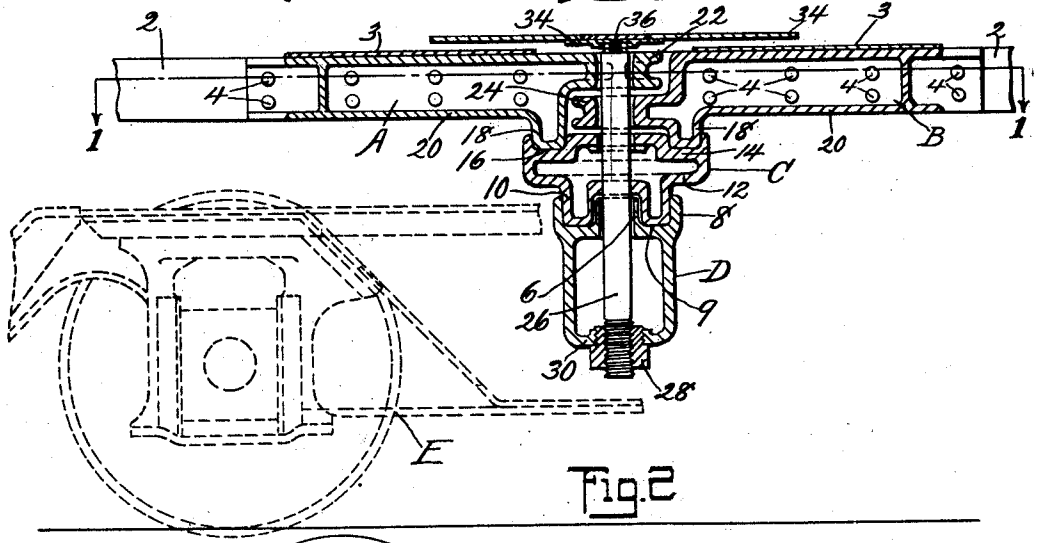


Fig.2

Fig.3

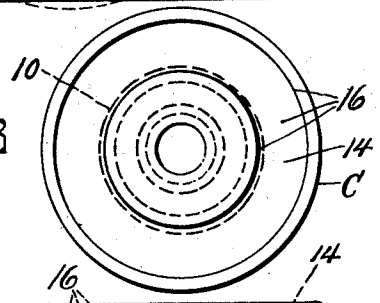
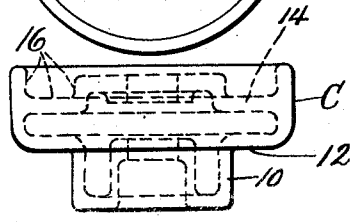


Fig.4



INVENTOR
William Griffin
BY F. R. Gibbs
ATTORNEY

Patented Mar. 29, 1932 1,851,702

UNITED STATES PATENT OFFICE

WILLIAM GRIFFIN, OF RUTHERFORD, NEW JERSEY, ASSIGNOR TO AMERICAN CAR AND FOUNDRY COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY

ARTICULATED CAR

Application filed June 15, 1931. Serial No. 544,434.

This invention relates to railway cars and has particular reference to articulated cars in which the adjacent end portions of two car bodies are supported for relative horizontal swiveling movement by a single car truck known in the art as a pivot truck.

One object of the present invention is the provision of an articulated car in which the adjacent end portions of two car bodies are supported by a center plate carried by a truck bolster, the axis of horizontal swiveling being defined by a king bolt or pivot pin secured to the bolster and defining the support for a foot plate which spans the adjacent end portions of the car bodies.

Other objects and advantages of this invention will be apparent from the following description taken with the accompanying drawings in which:

Figure 1 is a top plan view of the adjacent end portions of two car bodies, a part of the figure being taken on the line 1—1, Fig. 2.

Fig. 2 is a setional view through the adjacent end portions of the car bodies, the view showing the articulated joint and also showing, diagrammatically, a portion of a car truck.

Fig. 3 is a top plan view of the center plate, and

Fig. 4 is a side elevation of the center plate shown in Fig. 3.

Referring now more particularly to the drawings in which similar characters of reference designate similar parts in the several views, inasmuch as the invention may be applied to almost any desired form of car body, the construction of the body above the underframe is not illustrated. The bodies are provided with underframes which include spaced center sills 2, channel shaped in the instance shown, over which end floor sheets 4 are arranged, and between the center sills body connection castings A and B, respectively, are arranged and are secured to said center sills by suitable fasteners such as rivets 4 or the like. The castings A and B are substantially hollow and reinforced by suitable ribs 5 and cooperate with a center plate C carried by bolster D forming part of a car truck, of which latter a portion E is illustrated diagrammatically.

As more clearly shown in Fig. 2, the bolster D is of box formation and intermediate its ends is provided with an apertured guide lug 6 concentrically arranged with respect to an annular vertical rib 8, said lug 6 and rib 8 defining therebetween an annular recess 9 which receives the center plate C, the latter supporting the adjacent end portions of the car bodies.

The center plate C is substantially circular in shape and comprises a hollow casting having an annular supporting flange 10 formed with and depending from its lower wall 12; the flange 10 fitting the before mentioned recess 9 and positioning the center plate, as will be apparent. The upper wall 14 of the casting C is provided with an annular recess 16 into which arcuate bearings 18 formed with the lower walls 20 of the castings A and B extend whereby the adjacent end portions of the car bodies are supported for horizontal swiveling in the center plate.

The end portions of castings A and B are formed into apertured projections 22 and 24, respectively, which lap each other in spaced relation and which are alined, as more clearly shown in Figs. 1 and 2, to receive a king bolt or pivot pin 26 which extends therethrough and through the center plate C (the upper and lower walls thereof being centrally apertured), and through the bolster D; the pivot pin 26 being secured to the bolster in any suitable manner. In the instance shown, the lower end of the pin 26 carries a nut 28 which is threadedly engaged in the lower or bottom wall 30 of the bolster, and is provided for the purpose of securing the pin 26 to the bolster.

In articulated car construction it is necessary to provide a means for permitting transfer of passengers from one car body to the other and in the car of the present invention a foot plate 34 is provided which spans the space between the adjacent car bodies and is mounted on and secured to the upper end of the pin 26 in any suitable manner, as shown at 36; the foot plate 34 overlapping the end cover plates 3, as clearly shown in Fig. 2.

In use, it will be apparent that the respec-

tive car bodies may swivel horizontally relative to each other due to the supporting thereof by the center plate C and the body connection castings A and B. Excessive relative vertical shifting of the car bodies is prevented by reason of the fixed connection of the pin 26 in the bolster D, and the foot plate supporting bracket 38 secured to the foot plate 34. It will be apparent that excessive sidewise shifting of the respective car bodies is prevented by reason of the arcuate formation of the bearing members 18 and their engagement with the center plate C. To disassemble the construction shown, the nut 28 is removed whereupon the foot plate 34 and pin 26 may be removed by lifting the same vertically out of connection with the projections 22 and 24 and the center plate and then either or both of the car bodies may be removed from their engagement with the center plate C.

The drawings herein illustrate one embodiment of the invention, but it is to be understood they are for illustrative purposes only and various changes in the form and proportions of the construction shown may be made within the scope of the appended claims without departing from the spirit of the invention.

What is claimed is:

1. In an articulated car, a pair of car bodies arranged end to end and having their adjacent end portions overlapping in spaced vertical alinement, a truck beneath the adjacent end portions of the bodies provided with a bolster, a truck center plate removably supported on the bolster, and bearing members depending from the adjacent end portions of the bodies arranged in the center plate.

2. In an articulated car, a pair of car bodies arranged end to end and having their adjacent end portions overlapping each other in spaced vertical alinement, a truck beneath the adjacent end portions and provided with a bolster, a truck center plate removably supported on the bolster, bearing members depending from the adjacent end portions of the bodies arranged in the center plate, and a pivot pin extending through the overlapping end portions of the bodies, center plate and bolster.

3. In an articulated car, a truck, a truck bolster, a center plate removably positioned on the bolster and capable of swiveling movement thereon, a pair of car bodies arranged end to end and having projections at their adjacent end portions arranged in spaced vertical alinement, bearing members depending from the said adjacent end portions adjacent said projections and arranged in said center plate, and a pivot pin for tying together the adjacent end portions, center plate and bolster.

4. In an articulated car, a pair of car bodies arranged end to end and each provided with a body connection casting, the ends of which castings are provided with projections arranged in overlapping relation and in spaced vertical alinement, said projections having depending bearing members for engagement with a truck center plate.

5. In an articulated car, a pair of car bodies arranged end to end and each provided with a body connection casting, the ends of which castings are provided with projections arranged in overlapping relation and in spaced vertical alinement, said projections having depending bearing members for engagement with a truck center plate and a pivot pin connecting said projections and center plate for preventing excessive relative vertical shifting of said car bodies.

6. In an articulated car, a bolster having an annular recess on its upper surface, a pair of car bodies arranged end to end and provided with depending arcuate shaped bearing members, and a center plate supported by said bolster, said center plate comprising a casting having a depending annular supporting flange engaged in the recess in the bolster and an annular recess formed in its upper surface for engagement by said bearing members.

7. In an articulated car, a truck having a bolster, a pair of car bodies arranged end to end and having overlapping projections at their adjacent end portions arranged in spaced vertical alinement, the said adjacent end portions also having depending arcuate shaped bearing members, a center plate removably supported on the bolster with which the bearing members are engaged, a pivot pin extending through the projections into and through the center plate and into the bolster, means connecting the pin to said bolster, and a foot plate secured to the upper end of said pin and lapping the adjacent end portions of the car bodies.

8. A center plate for articulated cars comprising a hollow casting having an annular supporting flange formed with and depending from its lower wall and an annular recess formed in its upper wall.

9. In an articulated car, a truck having a bolster, a truck center plate removably supported by the bolster and provided with an annular recess in its upper surface, a pair of car bodies arranged end to end, said bodies having body connection castings secured to the adjacent end portions thereof, each of said castings having an apertured projection at one end thereof and one of said castings having its projection offset and underlying the projection on said other casting, with the apertures in said castings arranged in vertical alinement, said castings having depending arcuate shaped bearing members for engagement with the center plate.

10. In an articulated car, a truck having a

bolster, a truck center plate removably supported by the bolster and provided with an annular recess in its upper surface, a pair of car bodies arranged end to end, said bodies having body connection castings secured to the adjacent end portions thereof, each of said castings having an apertured projection at one end thereof and one of said castings having its projection offset and underlying the projection on said other casting and arranged in spaced relation relative thereto, with the apertures in said castings arranged in vertical alinement, said castings having depending arcuate shaped bearing members for engagement with the center plate.

In witness whereof I have hereunto set my hand.

WILLIAM GRIFFIN.