Sept. 3, 1929. E. R. VIBERG 1,726,872

ARTICULATED CAR

Filed May 23, 1928 4 Sheets-Sheet 1

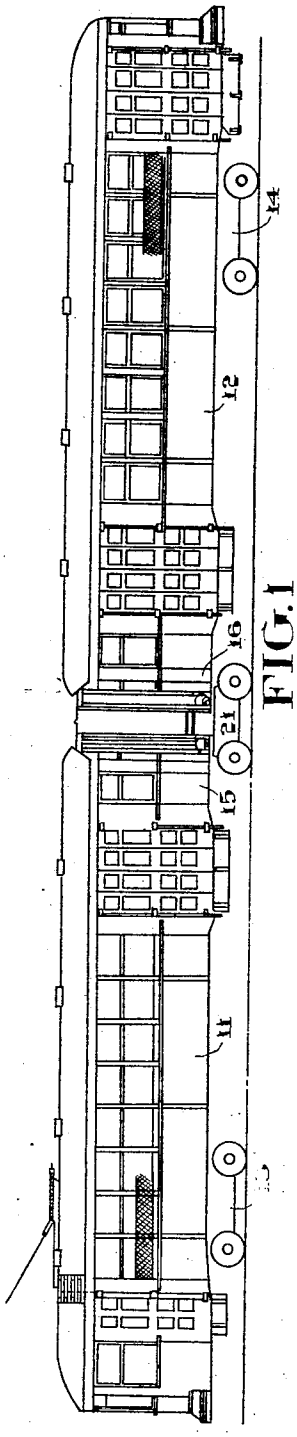


FIG. 1

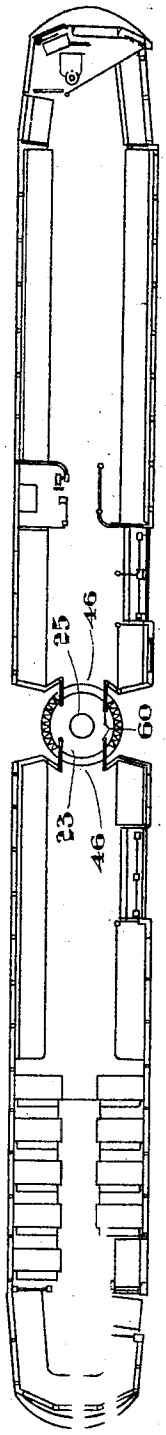


FIG. 2

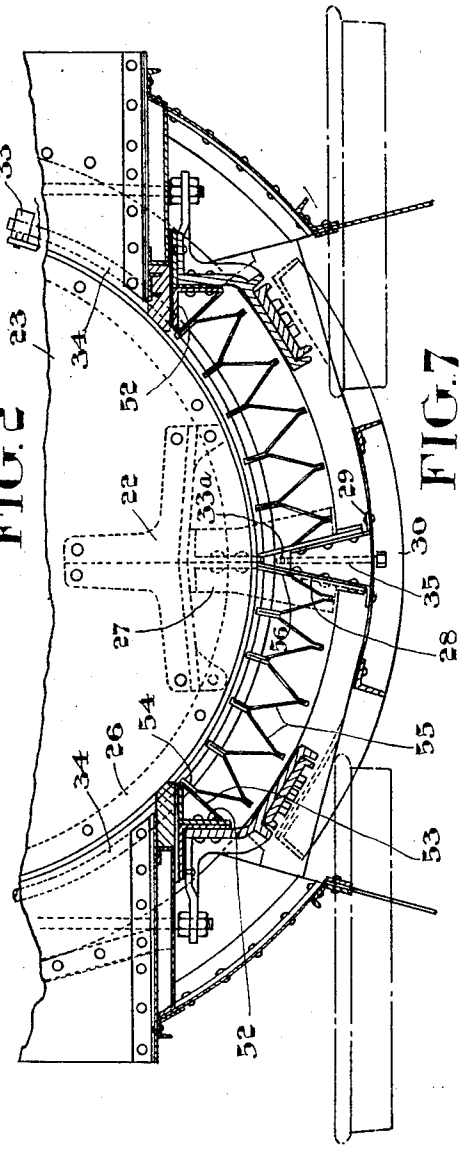


FIG. 7

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ARTICULATED CAR

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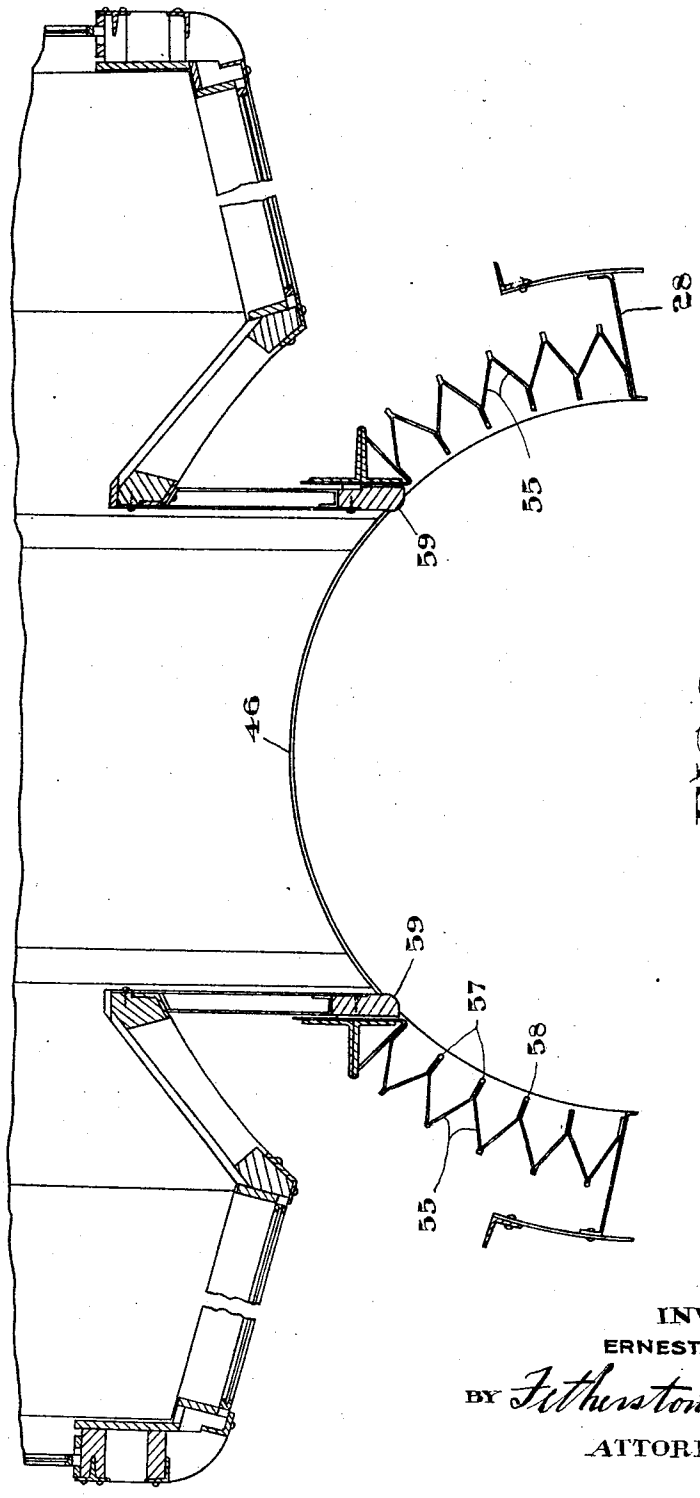


FIG. 3

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ARTICULATED CAR

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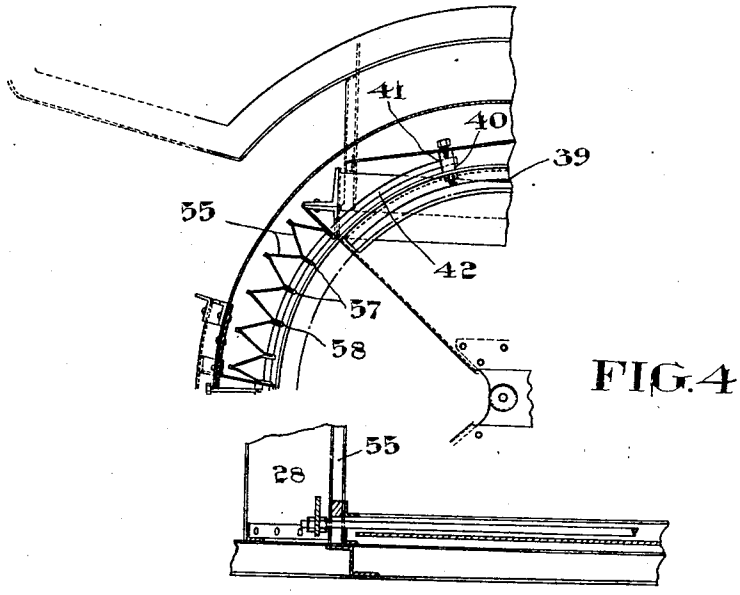


FIG. 4

FIG. 5

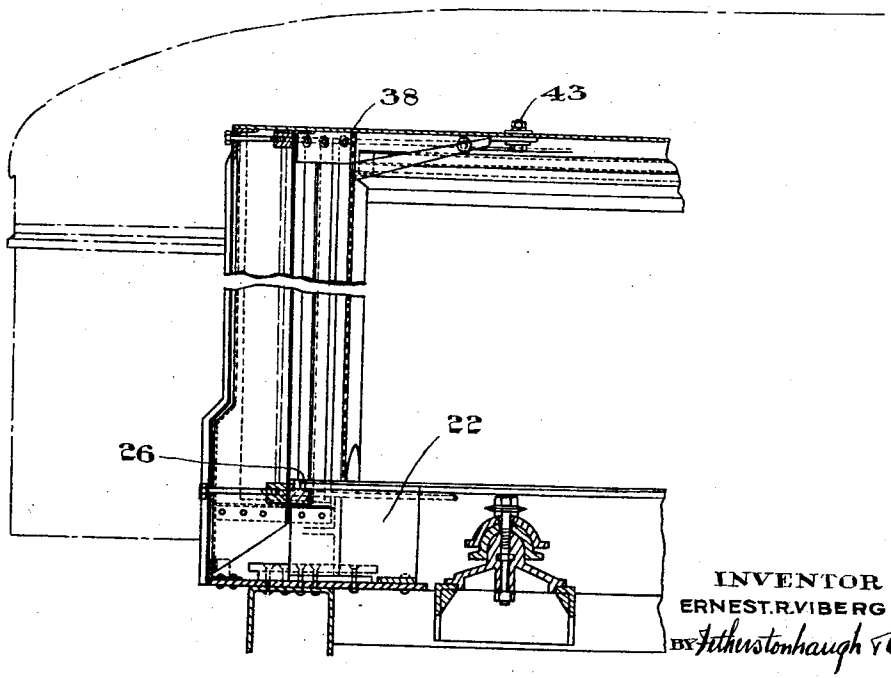


FIG. 6

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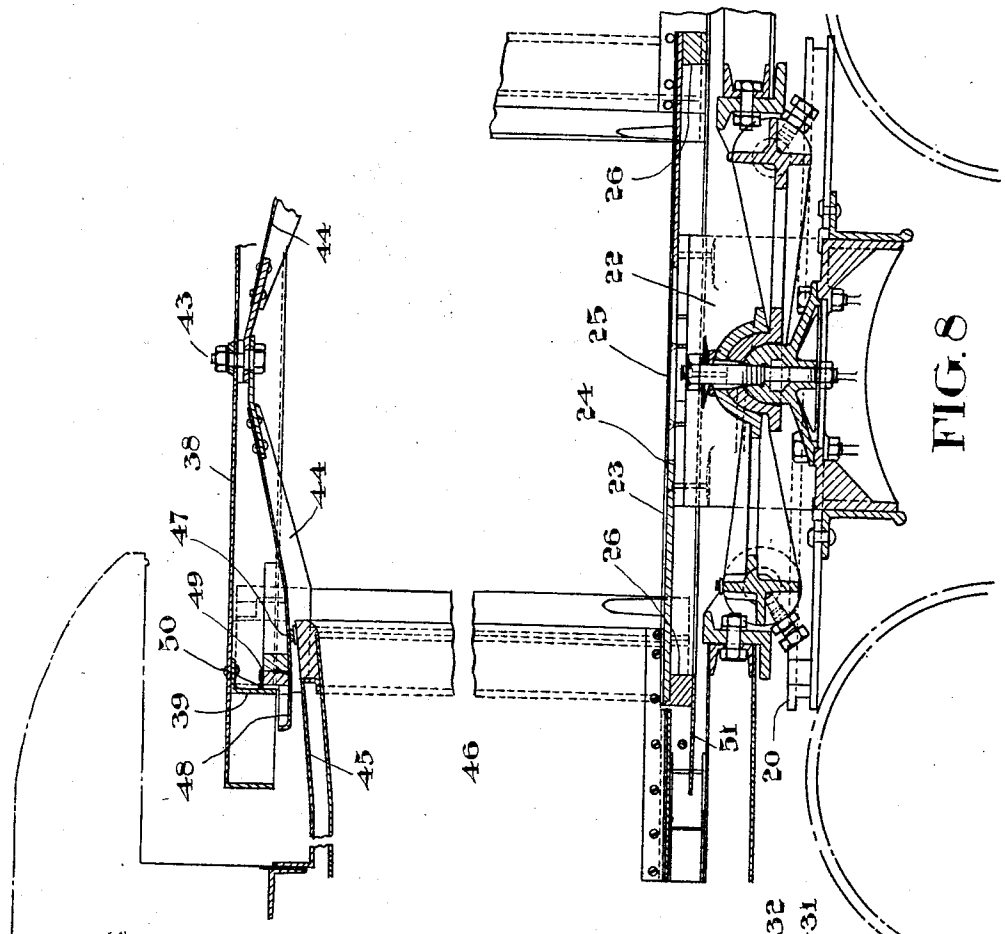


FIG. 8

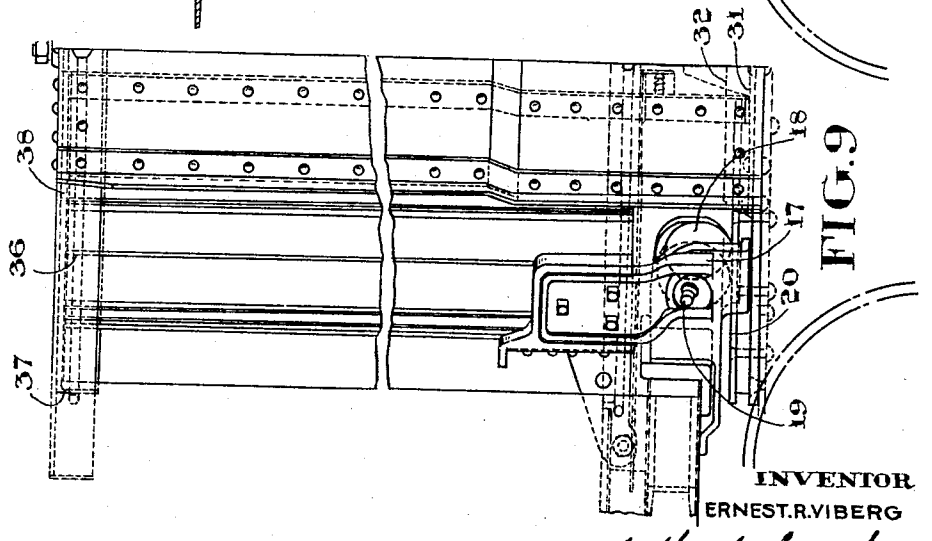


FIG. 9

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Patented Sept. 3, 1929. 1,726,872

UNITED STATES PATENT OFFICE.

ERNEST R. VIBERG, OF MONTREAL, QUEBEC, CANADA.

ARTICULATED CAR.

Application filed May 23, 1928. Serial No. 280,021.

This invention relates to new and useful improvements in articulated cars and particularly to the passageway connecting the sections of the car.

The object of the invention is to provide a weatherproof covering of simple construction forming a passageway between the sections.

Another object is to provide a covering of a flexible nature which will not restrict the passageway between the car sections while same are rounding sharp curves.

A further object is to provide a covering of the telescopic type which will be easily assembled and repaired and which will wear longer than the types at present in use.

According to my invention I provide an articulated car with the adjacent ends thereof mounted on a common truck. A circular platform is secured to the truck forming a passageway between the adjacent section openings. A four piece telescopic covering is secured to vertical supports extending upwardly from the platform and to the framing surrounding the section openings. Suitable guides and sealings are provided to make the covering weatherproof.

In the drawings which illustrate one form of my invention:—

Figure 1 is a side elevation of one type of my improved articulated car.

Figure 2 is a plan view of the car shown in Figure 1.

Figure 3 is an enlarged part sectional plan of one end of one of the sections showing the telescopic covering between the sections of the car.

Figure 4 is a part plan view of the cover connection under the platform plate.

Figure 5 is a part sectional elevation of the lower end of the lower part of the cover.

Figure 6 is an enlarged transverse sectional end elevation of the cover showing its connection to the truck.

Figure 7 is a part sectional plan of the floor plate.

Figure 8 is a part longitudinal section of the cover, plate, and top cover.

Figure 9 is a part side longitudinal view of the cover.

Referring more particularly to the drawings 11 designates one section of an articulated car and 12 the other section. The remote ends of the car are mounted in the usual manner on trucks 13 and 14. The adjacent ends 15 and 16 are provided with bearings 17 having rollers 18 rotatably mounted on pins 19 passing through the bearings. The rollers rest on runways 20 secured to the upper surface of the centre truck 21, positioned between the car sections. Secured to the truck plate or surface of the truck is the bracket 22 for the platform 23. The central portion of the platform is provided with a shouldered recess 24, into which is fitted a cover plate 25 which may be quickly and easily removed to allow access to the truck therebeneath. Between the edge of the platform 23 and the ring 51, a spacing ring 26 is inserted this being necessary to provide a weatherprof joint at the bottom of the telescopic cover and floor plate 25. The surface of the plate is made level with the floor of the car. Also secured to the brackets 22 are the angle brackets 27, to which diametrically opposite V-shaped supports 28 are attached. These supports extend from top to bottom of the passageway and have flanges 29 to which are attached the curved plates 30. The lower edges 31 of the plates are secured to the truck by means of the angles 32. Passing through eye bolts 33 and guide blocks 33^a, are the guide rods 34 which are positioned at a predetermined radius from the centre of the platform. The eye bolts are secured to the bar 26 and the guide blocks are secured between the sides of the V-shaped supports and to the bar by means of the bolts 35. The curved plates form a guide for the flexible or telescopic cover hereinafter described. The upper edge 36 of the curved plate has attached thereto a supporting angle 37. The top plate 38 is of circular form and is attached to the angle 37.

Spaced from the edge of the top plate and concentric therewith is the angle ring 39. Secured to the angle ring 39, by eye bolts 40 and guides 41, are the guide rods 42. These guide rods are concentric with the angle 39 and only extend partially around the angle. The roofs of the sections are adapted to overlie part of the top plate. Open passageways 46 are formed in the adjacent ends of the sections to allow passengers to pass from one section to the other. Pivotally attached to a bolt 43 passing through the centre of the plate 38 are the fan tailed cover plates 44 which rest on the top of the roof 45 covering the passageway extension 46. Sealing members 47 are placed between the fan tailed plates and the roof 45. The edge 48 of the plates 44 is turned upwardly to form

troughs. Blocks 49 are secured to the upper side of the fan tailed plates in proximity to the angles 39 and flexible sealing members 50 are secured to said blocks and contact with the said angles. Secured to the bar 26 and extending outwardly therefrom and beneath the car flooring is the ring 51, to prevent air from passing through the floor into the car at this point. Extending the full depth of the doorway, at the adjacent ends of the sections, are the ankles 52, and secured to a plate 53 on said angles are the vertical ends 54 of telescopic flexible covering members 55. The other ends 56 of the said members 55 are secured to the V-shaped plate supports. The covers are of the bellows type and the inner edges 57 may be reinforced by means of the reinforcing strips 58. These strips extend from top to bottom of the covers.

Spaced from the lower and upper inner edges of the covers are perforations and the guide rods pass therethrough. The cover extends from below the platform to a point above the roof of the passageways to protect passengers as they pass from one section of the car to the other. Also secured to the angles 52 on each side of the passageway are the sealing blocks 59. The blocks 59 contact with the angles to which the guide rods are secured.

It will be seen that in operation, the covers between the sections expand and contract to accommodate the movement of the sections when the car is rounding a curve. The passageway openings remain constant as the covers are secured to the sides of the openings at the centre of the car. The covers are concentric with the circular platform secured to the truck, so that there is no encroachment on the platform space due to the movement of the bellows. By providing sealing members at the top and bottom of the guide supports, the passageway is protected from draughts and the weather. The top plate extends beyond the edge of the bellows-shaped covers. The curved plates secured to the V-shaped supports protect the bellows-shaped covers. At no time during the relative movement of the sections is the platform obstructed and stanchions 60 may be mounted thereon. The ring below the circular platform and the car flooring prevents air from passing upwardly through the floor at the ends of the sections.

Having thus described my invention, what I claim is:—

1. In articulated car construction, a plurality of car sections spaced from one another and having openings at their adjacent ends, a truck positioned between the sections and adapted to support same, a platform secured to said truck forming a passageway between the sections, and a flexible cover surrounding the platform and secured thereto forming a weatherproof covering for same, said cover being also secured to the sections to allow relative movement between the sections without encroaching on the platform area.

2. In articulated car construction, a plurality of car sections spaced from one another, a truck between the sections and adapted to support same, a platform secured to the truck, a supporting plate secured to the platform and to the truck, said plate extending upwardly therefrom, collapsible covers extending between the supports and the sections and surrounding the platform to allow relative movement between said sections without encroaching on the platform area.

3. In articulated car construction, a plurality of car sections spaced from one another, said sections being supported on separate trucks at opposite ends and at their adjacent ends on a common truck, a circular platform secured to the common truck, vertically disposed supports secured to the platform and to the truck, curved guard plates secured to said supports, flexible covers each secured to the supports and to the car sections and conforming to the edge of the platform, and guides for the bottom of the covers.

4. In articulated car construction, a pair of sections, trucks under the remote ends of the sections, a central truck between the sections and adapted to support same, a circular platform secured to the central truck, supports secured to the platform and to the truck, said supports extending upwardly therefrom, curved guards concentric with the platform and secured to the supports, a circular cover plate secured to the top of the supports and to the guard, flexible covers extending from the top plate to a point below the platform, said covers being secured to the ends of the sections and to the supports, the covers being in close proximity to the edge of the platform, and guide rods secured to the top plate and to the platform to engage with the flexible covers.

5. In articulated car construction, a pair of sections having openings at their adjacent ends, trucks supporting the sections at their remote ends, a central truck between the sections and adapted to support the adjacent ends of same, a circular platform between the sections and secured to the central truck, supports secured to the edge of the platform and to the truck and extending upwardly therefrom, curved guards secured to the supports, said guards being concentric with the platform, a circular cover plate secured to the upper end of the guards and over the section openings, flexible covers in contact with the edge of the platform and secured to the supports and to the sections at the side of the openings therein, and guide rods passing through the covers and secured to the platform and the cover plate.

6. In articulated car construction, a pair of car sections having openings at their adjacent ends, trucks supporting the sections at

their remote ends, a central truck adapted to support the adjacent ends of the sections, a circular platform between the sections, plates extending from the underside of the platform below the floor of the sections, covers over the openings, supports secured to the platform and the truck and extending upwardly therefrom, curved guards concentric with the platform and secured to the platform, a circular cover plate secured to the upper edge of the supports and the guards, means secured centrally of the cover plate and resting on the covers over the openings to make a waterproof connection thereat, flexible collapsible covers secured to the guards and to the sections on each side of the opening thereinto, and curved guide rods passing through the flexible covers at their top and bottoms, said rods being secured to the platform and to the circular cover plate.

In witness whereof, I have hereunto set my hand.

ERNEST R. VIBERG.