

July 14, 1931.

H. P. SCHMECK

1,814,969

AMUSEMENT CAR

Filed May 16, 1930

4 Sheets-Sheet 1

Fig. 1.

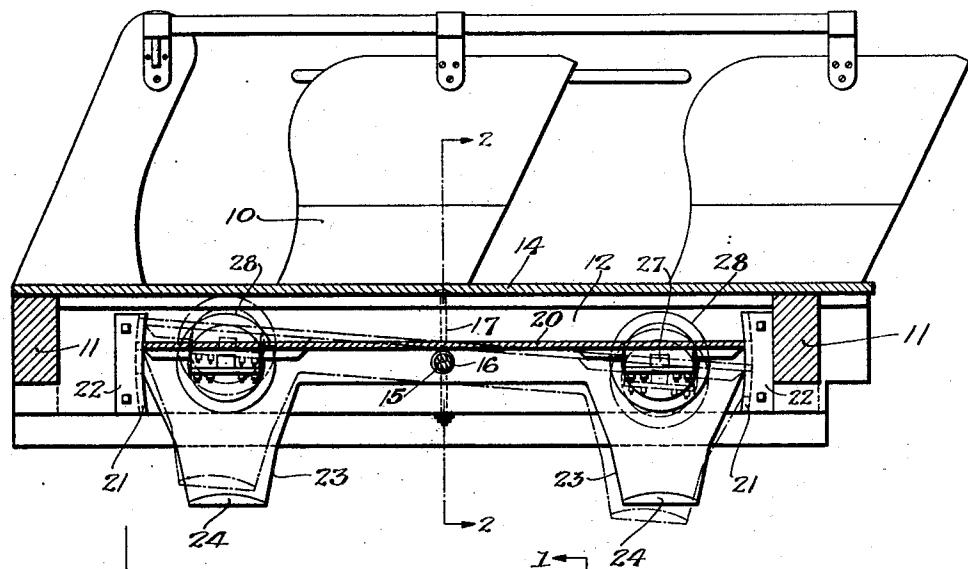
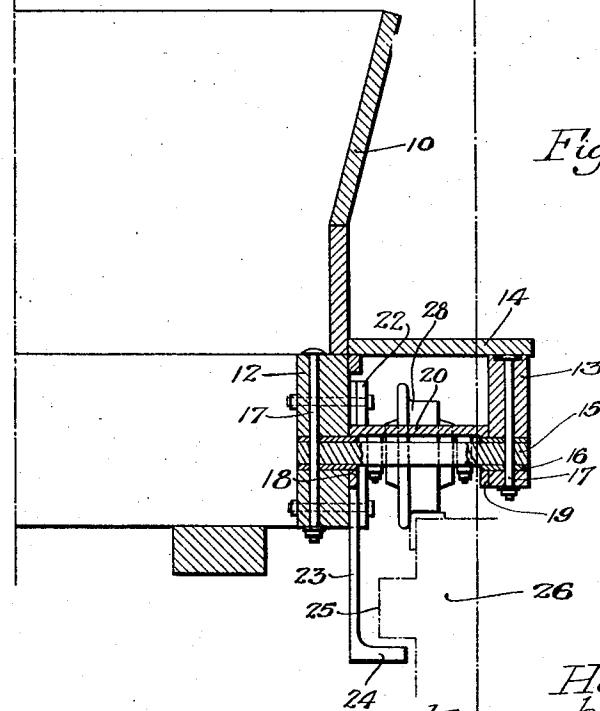


Fig. 2.



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4 Sheets-Sheet 2

Fig. 3.

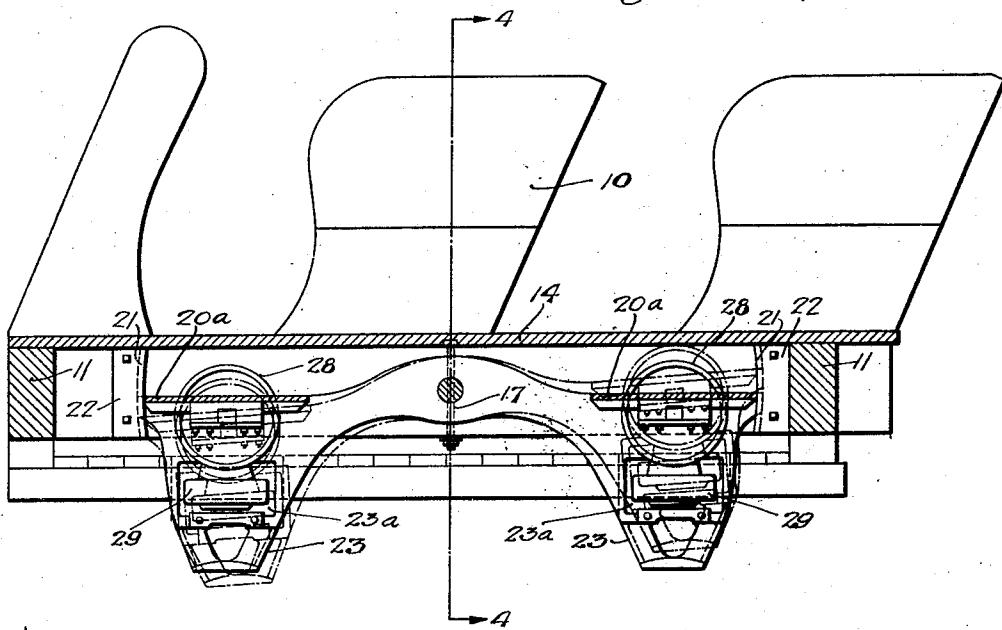
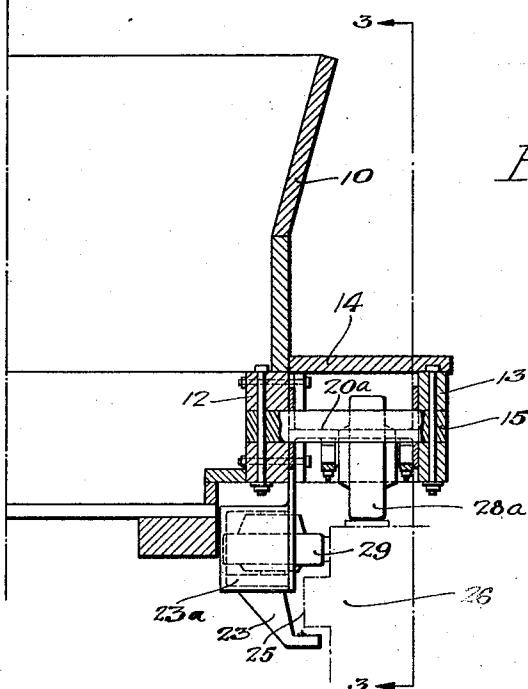


Fig. 4.



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4 Sheets-Sheet 3

Fig. 5.

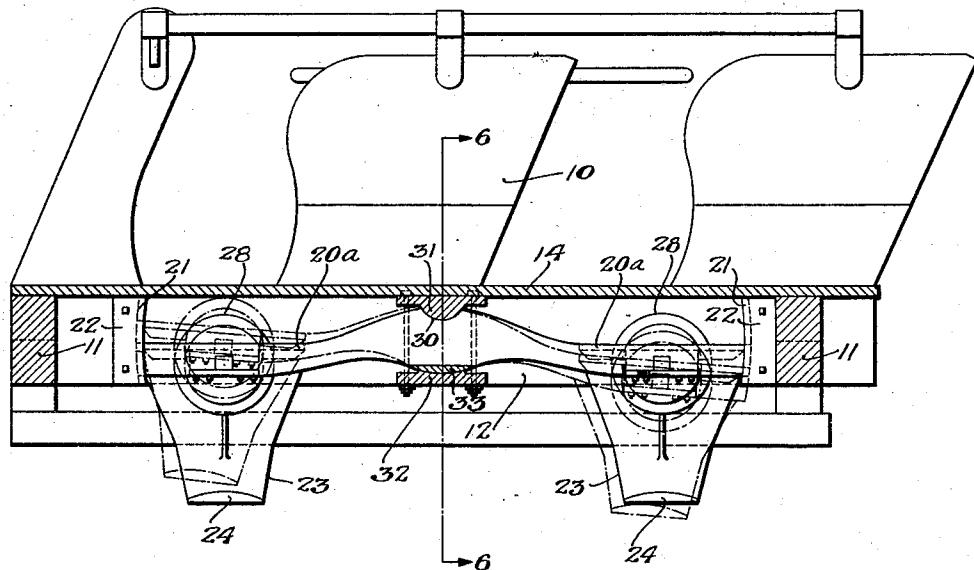
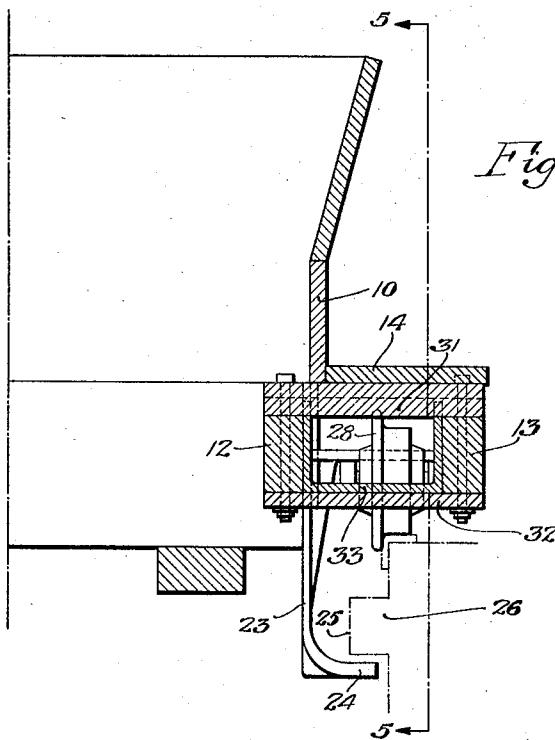


Fig 6.



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4 Sheets-Sheet 4

Fig. 7.

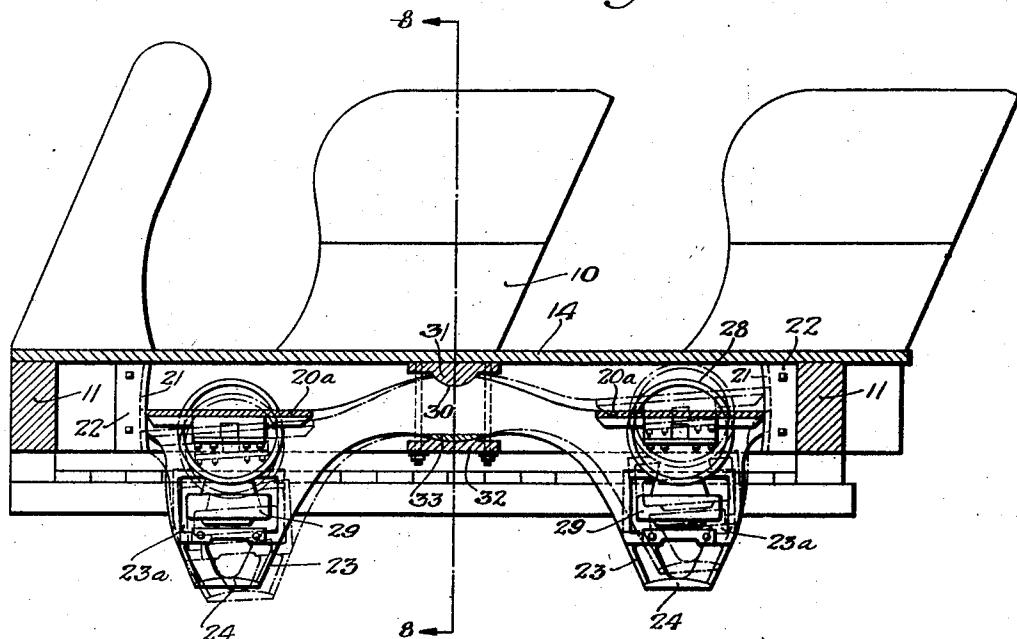


Fig. 8.

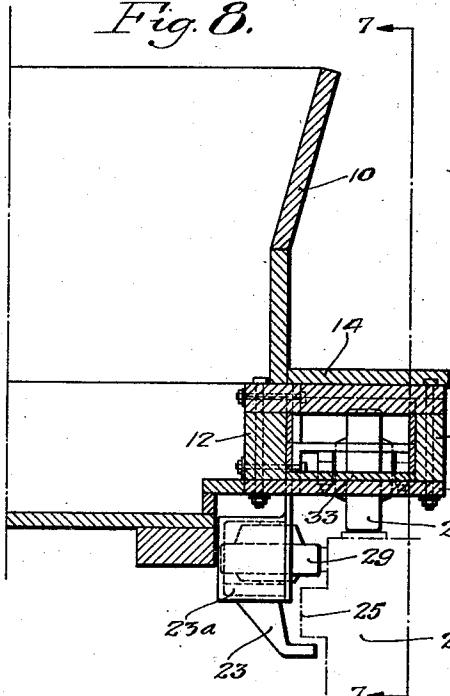


Fig. 9.

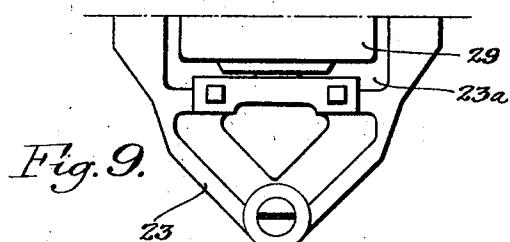
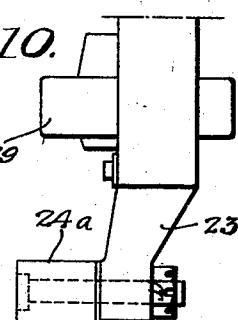


Fig. 10.



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# UNITED STATES PATENT OFFICE

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## AMUSEMENT CAR

Application filed May 16, 1930. Serial No. 452,965.

This invention relates to amusement cars such as employed in scenic railways and the like, and more particularly to the method of mounting the car upon the supporting wheels thereof.

An important object of the invention is to provide a supporting wheel mounting for vehicles of this class so constructed that maintenance of the wheels in engagement with the track may be assured. It is well known to those familiar with the art, in scenic railways and in similar structures due to the curvature of the tracks at the high speed at which the vehicles are traveling it is necessary to provide high banks at the curves. This banking results in a twisting of the tracks which, with the ordinary amusement car construction, causes one of the wheels of the car to leave the track.

A further and more specific object of the invention is the provision of a structure of this character which may be readily incorporated in the vehicle structure without any extensive modification thereof, which will be durable and efficient in service and a general improvement in the art.

These and other objects I attain by the construction shown in the accompanying drawings wherein, for the purpose of illustration, I have shown a preferred embodiment of my invention and wherein:

Fig. 1 is a longitudinal sectional view showing a wheel mounting constructed in accordance with my invention, taken on line 1—1 of Fig. 2;

Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a view similar to that of Fig. 1, illustrating a modified structure and taken on line 3—3 of Fig. 4;

Fig. 4 is a section on line 4—4 of Fig. 3; Fig. 5 illustrates a further modification and is a section taken on line 5—5 of Fig. 6;

Fig. 6 is a section on line 6—6 of Fig. 5; Fig. 7 illustrates a further modification, the section being taken on line 7—7 of Fig. 8;

Fig. 8 is a section on line 8—8 of Fig. 7; Fig. 9 is a fragmentary inner face view of a modified type of wheel aligning device; and

Fig. 10 is an end view thereof.

Referring now more particularly to the drawings, the numeral 10 generally designates the car body which, in accordance with my invention, includes cross beams 11 arranged adjacent opposite ends thereof. At

each side of the car body the beams 11 are connected by inner and outer longitudinally-extending beams 12 and 13, the space between the inner and outer beams being preferably capped at its upper end, as indicated at 14,

this cap serving as a running-board. At the approximate center of the car, the beams 12 and 13 at one side of the car have fixed therein opposite ends of a pivot shaft 15 illustrated in the present instance as mounted in

bushings 16 in the beam, which are movable upon removal of the securing bolts 17 for the shaft. Disposed against the inner and outer beams 12 and 13, and more particularly against adjacent faces thereof, and

mounted upon the pivot shaft 15 are inner and outer wheel truck elements 18 and 19 connected for simultaneous movement. In

Figs. 1 and 2 the frame elements 18 and 19 are shown as connected throughout their length by a horizontal web 20 so that the frame has a channel formation. The ends of the inner frame element 18 operate in

grooves 21 disclosed in the present instance as produced by securing against the inner longitudinal beam 12 a plate 22 having its edge rabbeted so that it combines with the beam to produce the groove. At opposite ends, the inner frame element has depending

portions 23, the lower ends of which are outwardly as at 24 to extend beneath the hold-down rib 25 of a track structure 26 upon which the car is operated. Secured between the side members, and in the present instance directly to the web 20, are the pivot shafts

27 for supporting wheels 28. In the form shown in Figs. 1 and 2, wheels 28 are of the flanged type and engage not only the upper surface of the rail, but the inner face thereof, so that they serve to prevent side motion of the car. It will be obvious that with

the wheels at one side of the car, mounted in the manner above described, and the wheels at the opposite side thereof fixed, compensation is had for any unevenness of the tracks

and the wheels are permitted to remain in engagement with the tracks at all times. A solid support is thus provided for the vehicle at all times and many of the unevenesses in operation, to which such vehicles are subject, are removed.

Instead of employing the type of wheels illustrated in Figs. 1 and 2, the construction employed in Figs. 3 and 4 may be provided.

10 In this construction the wheels 28—*a* are unflanged, and simply rest on the upper surface of the track and the depending portions 23 are modified to provide recesses 23—*a* receiving side thrust rollers 29 which engage 15 the inner faces of the tracks to prevent side-sway. The structure illustrated in these figures is further modified in that instead of extending the web 20 from end to end of the side members, the side members are connected 20 only by short sections of web 20—*a* disposed at opposite ends thereof.

In the structure of Figs. 5 and 6 the side members are connected by the short webs 20—*a* at opposite ends thereof and at their 25 centers are notched in their upper surface with arcuate notches 30 co-acting with a transversely-extending arcuately curved pivot plate 31. To the pivot plate 31, and to the longitudinal members 12 and 13, is 30 secured a second pivot plate 32 extending beneath the side members of the frame and having its upper surface curved with about the same axis of curvature as the lower face of plate 31. The central portions of the side 35 members of the truck frame are connected by a web 33 at their lower edges, which web has its lower surface convexly curved to co-act with the curved upper face of the plate 32. This construction provides a modification of 40 the pivot arrangement illustrated in Figs. 1 to 4 inclusive. In Figs. 5 and 6 the wheel and track arrangement of Figs. 1 and 2 is employed.

In Figs. 7 and 8, the structure of Figs. 5 45 and 6 is modified by the use of the wheel mounting of Figs. 3 and 4.

In Figs. 9 and 10 I have suggested a modification of the structure of the out-turned portions 24. In these figures these out-turned portions are illustrated as consisting 50 of rollers 24—*a* carried by the lower ends of the depending portions.

It will be obvious that in each of the structures hereinbefore set forth the wheels of the car may remain in engagement with the tracks without regard to inequalities thereof, or to twists resulting in banking, and that at the same time structures are provided which will prevent any accidental separation of the car from the track.

As the construction illustrated is obviously capable of a considerable range of change and modification without in any manner departing from the spirit of my invention, I

do not wish to be understood as limiting myself thereto except as hereinafter claimed.

I claim:

1. In an amusement car, a frame, a pair of longitudinally-spaced supporting wheels arranged at one side of the frame and rigidly connected thereto, a longitudinally-extending beam pivotally connected to the frame at the opposite side thereof and a pair of supporting wheels carried by opposite ends of said beam. 70

2. In an amusement car, a frame, a pair of longitudinally-spaced supporting wheels arranged at one side of the frame and rigidly connected thereto, a longitudinally-extending beam pivotally connected to the frame at the opposite side thereof, a pair of supporting wheels carried by opposite ends of said beam and guides in which opposite ends of the beam operate for preventing transverse displacement of said ends. 75

3. In an amusement car, a frame, a pair of longitudinally-spaced supporting wheels arranged at one side of the frame and rigidly connected thereto, a longitudinally-extending beam pivotally connected to the frame at the opposite side thereof, a pair of supporting wheels carried by opposite ends of said beam and means at opposite ends of the beam for co-action with track elements to prevent separation of the wheels carried by the beam 90 from the tracks. 85

4. In an amusement car, a frame, a pair of longitudinally-spaced supporting wheels arranged at one side of the frame and rigidly connected thereto, a longitudinally-extending beam pivotally connected to the frame at the opposite side thereof, a pair of supporting wheels carried by opposite ends of said beam and means associated with each wheel for preventing separation of the wheel from a track 100 with which it is engaged. 105

5. In an amusement apparatus, a car embodying a frame, a supporting structure for the car, including a pair of rails, a pair of wheels fixed to the frame to engage one of said rails, a beam pivoted to the frame intermediate its ends and having at its ends wheels to engage the other of the rails and co-acting means upon the last-named rail and opposite ends of the beam for limiting tilting movements of the beam with relation to the rail. 110 115

6. In an amusement car, a frame, a pair of supporting wheels fixed to the frame and adapted to engage with a track, a beam having a pair of wheels at opposite ends thereof for engagement with a track, a pivot element carried by the frame and including similarly curved spaced seats between which the beam extends, a socket in one face of the beam for reception of one of said seats and an arcuately curved wear plate on the opposite face of the beam for engagement with the other of said seats. 120 125

7. In an amusement car, a frame, a pair of brackets rigidly secured to the frame, a beam 130

pivoted to the frame, a bracket upon each end of the beam and a supporting wheel mounted in each bracket and adapted to engage a track, the brackets affixed to the frame being disposed at a common side of the frame, the beam extending longitudinally of the frame and being disposed at the opposite side thereof.

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