Oct. 30, 1956 W. M. ROBB 2,768,588

DETACHABLE MONORAIL TRACK CONNECTIONS

Filed April 28, 1953

Fig. 1.

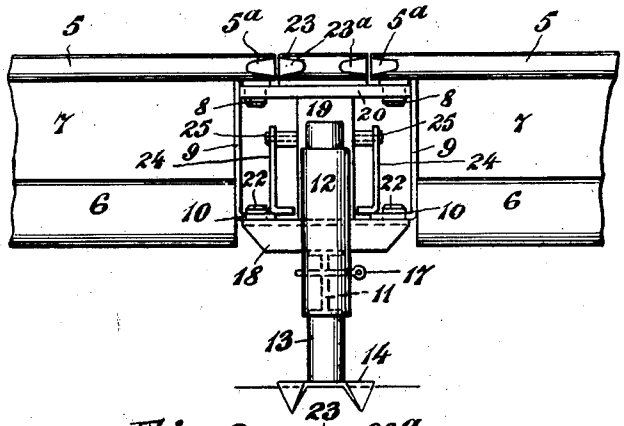


Fig. 2.

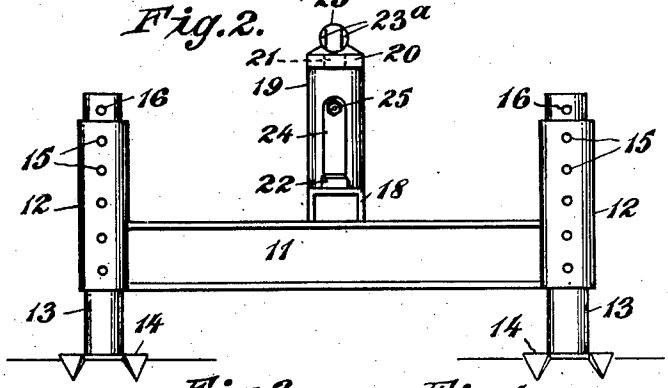


Fig. 3.

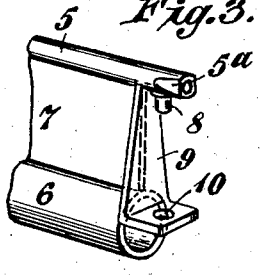
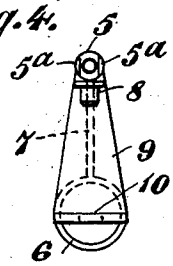


Fig. 4.



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DETACHABLE MONORAIL TRACK CONNECTIONS

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2 Claims. (Cl. 104—118)

The invention consists of a monorail system characterised in that each rail length comprises a cylindrical head connected by a web to a cylindrical foot of greater diameter than the head and furnished at each end with a bracket serving for the interconnection of the rail length with a transversely disposed supporting pedestal.

A convenient embodiment of the present invention will now be described with particular reference to the accompanying drawings in which:

Fig. 1 is a side elevation showing the adjacent ends of two rail lengths interconnected with a supporting pedestal.

Fig. 2 is an end view of a supporting pedestal.

Fig. 3 is a perspective view of an end of a rail length, and

Fig. 4 is an end view of a rail length.

Each unit length of rail comprises a head 5 of tubular cylindrical form which is connected to a tubular cylindrical foot 6 of greater diameter than the head by a vertically extending web 7. The head 5 of each length of rail extends at each end beyond the extremity of the foot and web and is furnished with a downwardly projecting peg 8 whilst welded to each end of the web 7, a part of the foot 6 and the underside of the head 5 is one limb of a two limbed cranked bracket 9 the other limb or flange whereof projects beneath the extending portion of the head 5 and has formed therein a circular aperture 10 the centre whereof is in vertical axial alignment with the vertical central axis through the peg 8 which is cylindrical.

Each end of each rail length is adapted for engagement with a supporting pedestal which extends transversely relative to the rail to provide rigidity. This pedestal comprises a cross member of H section girder 11 secured at each end to a tubular socket 12 within which is adjustably accommodated the vertically extending leg 13 having a foot 14. By virtue of the fact that the legs 13 can be adjusted in the tubular sockets 12 the height of the pedestal relative to the ground can be adjusted and further the legs 13 can be adjusted in the sockets 12 to maintain the cross member 11 horizontal even though the feet 14 are engaging ground at different levels. In order to admit of the variable setting of the legs 13 in their associated sockets 12, the sockets are provided with a plurality of pairs of diametrically opposed holes 15 which are equally spaced throughout the height of the sockets and the legs 13 are provided with a plurality of transversely extending holes 16 which are spaced apart by a distance equal to the spacing apart of the pairs of holes 15 in the socket 12 so that any one of the holes 16 can be brought into register with any one of the pairs of holes 15 in the socket 12 and locked in this position by the insertion through the holes 15 and the hole 16 of a locking pin 17. Mounted transversely on the member 11 at the centre thereof is an inverted U-shaped lower bridge piece 18 on which is centrally mounted a pillar 19 supporting

at its upper end an upper bridge piece 20 which is parallel to the lower bridge piece 18 and of substantially equal length. The upper bridge piece 20 has formed therein a pair of circular holes 21 which are adapted to receive the pegs 8 on adjacent ends of two rail lengths and the centre of these holes is aligned with the central vertical axis of a pair of upwardly projecting pegs 22 on the upper face of the lower bridge piece 18, these pegs 22 being adapted for engagement with the holes 10 in the bracket 9 on adjacent ends of the pair of rail lengths.

The upper bridge piece 20 has mounted thereon a short length of cylindrical rail head 23 which serves to fill the gap obtaining between the ends of the heads of two rail lengths engaged with the pedestal.

It will be understood that since the central vertical axes of the pegs 8 and pegs 22 are aligned when rail lengths are engaged with a pedestal the rail lengths can be hinged about a vertical axis relative to the pedestal to admit of a rail head 5 being set at a slight angle in a horizontal plane relative to the rail head 23. To provide for the free running of a vehicle over the junction between the rail head 5 and the rail head 23 which are not in absolute alignment, the ends of the rail heads 5 and 23 are chamfered as shown at 5*a* and 23*a*.

To prevent inadvertent disengagement of a rail length from a pedestal due to excessive vibration or any other cause, there are provided on the pillar 19 a pair of gravity catches in the form of pendulum arms 24 which depend from pivot points 25, the lower portions of these catches being adapted to overlay the projecting limbs of the brackets 9 which are engaged with the pedestal and prevent these limbs from rising relative to the pedestal to disengage the holes 10 from the pegs 22 until the catches 24 have been manually swung from their vertically depending position.

I claim:

1. In a monorail system comprising alternate rail sections and supporting pedestals, in combination, a flange extending horizontally from the lower portion of each end of each rail section toward the adjacent pedestal, a pin and socket connection which pivotally supports each such flange on the adjacent pedestal, a second pin and socket connection, vertically aligned with the first, which pivotally supports the upper portion of each end of each rail section on the adjacent pedestal, said connections forming a hinge that can be disassembled by lifting the rail section, and a pendulum arm pivoted to the pedestal above each such flange, the lower end of which arm lies closely above such flange when the arm is in its normal vertical position, to prevent upward movement of the rail section with respect to the pedestal and thereby lock the rail section and pedestal together.

2. In a monorail system as claimed in claim 1, a tubular foot forming the lower portion of each rail section, and a bracket on each end of each rail section, from which bracket extends the flange that is pivotally supported on the adjacent pedestal.

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