

NEW ROAD CHANGE DESIGN IN TRANSPORTATION SYSTEMS

Description:

In rail transport, a track change device allows a train to pass through a fork alternately on one track or another. For this, there are different types of track change devices, of which the most frequently used is the change of points. However, these types of lockable needle change devices have several drawbacks. Outside the railway field, there are various fields in which the movement of products or elements supported on rails is also used, such as in the field of industrial production, logistics, or in toys that emulate trains. In this regard, it should be noted that, mainly in the field of logistics, there are so-called "aerial" rail systems where the rail is in an elevated position and the product or item it is transporting is suspended from said rail. In any case, all these systems designed for moving elements or products along rails have similar drawbacks with regard to changing tracks. The present invention presents a novel system for changing tracks that stands out for its peculiarity of grouping several changes of tracks in a single determined area, it goes from having track changes at points A, B, C and successively to a single point A. With this system we manage with a single device to make multiple lane changes depending on where we want to direct the vehicle, product, merchandise, material or part. It can be installed both in applications where the moving element is supported on the tracks and in applications where the moving vehicle or product is hanging from the tracks. Its application is useful both in the railway, logistics, or industrial fields.

Keywords:

[Transport](#), [Tracks](#), [Railway Transport](#), [Logistics](#), [Picking](#)

Sectors:

[Transport](#), [Tourism](#), [Culture and Education](#), [Engineering](#)

Areas:

[Industrial](#), [Mechanics](#), [Technological Improvements](#), [Infrastructure improvements](#), [Transport](#)



Advantages:

This invention has the following advantages: - Design so unique that it achieves greater control since maintenance is only done at a single point. - This device can be particularly advantageous on high-performance railways, especially high-speed, since it has a minimum degree of freedom and dispenses with the bolts due to their wear and tear and high maintenance. - In the industrial and logistical field, it would allow speed, easy repair and replacement and, above all, saving space and installation costs.

Uses and Applications:

The invention generally belongs to the field of moving objects on tracks, and can be applied to various fields including: - change of tracks for railway equipment. - Lane changes in automated logistics centers for the transport and distribution of goods (picking). - change of lanes in the automated transport of any part or material in any production, transport and distribution process in an industrial plant.

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