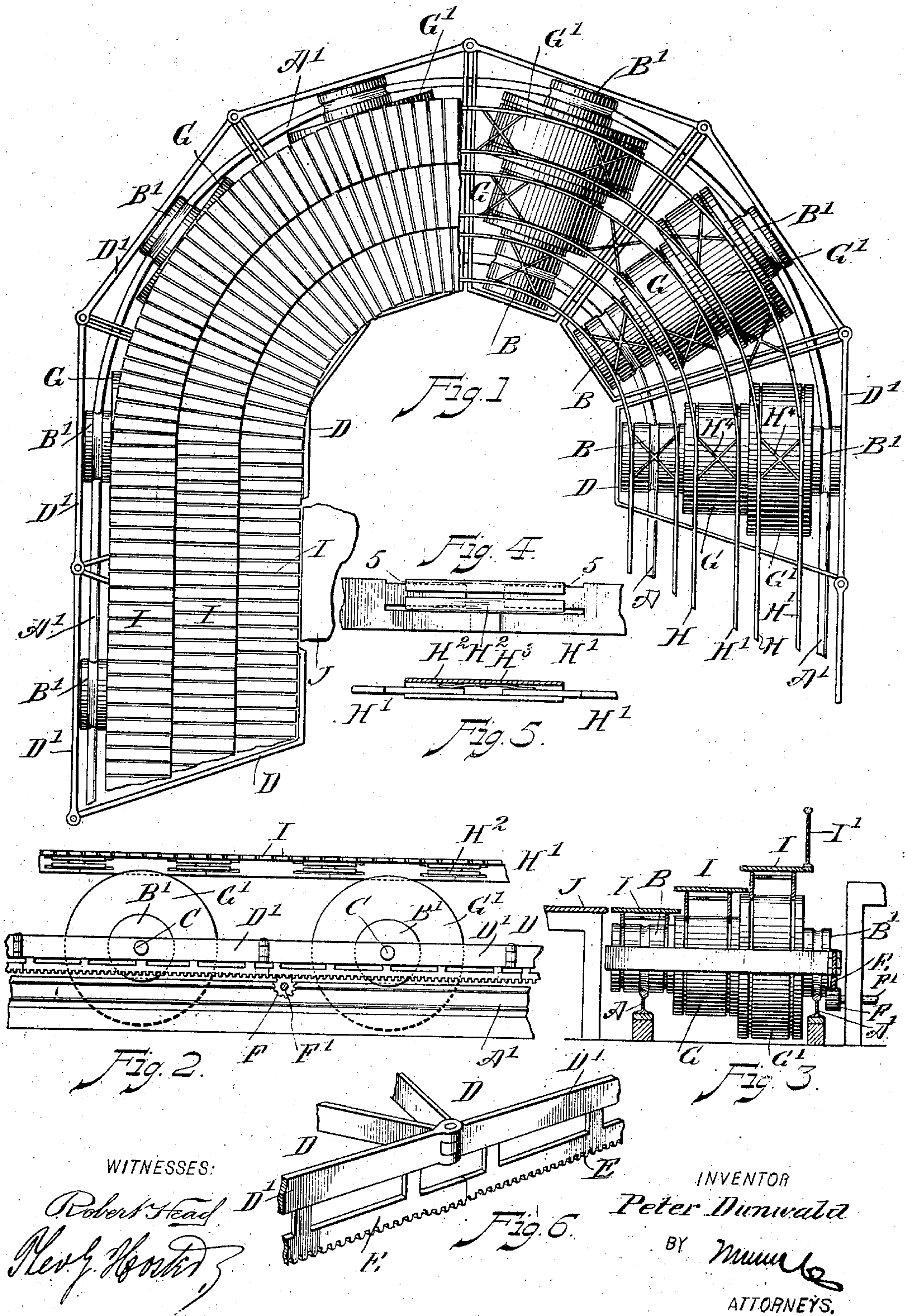


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PATENTED JUNE 16, 1903.

P. DUNWALD.
RAILWAY CONSTRUCTION.
APPLICATION FILED APR. 6, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

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RAILWAY CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 731,292, dated June 16, 1903.

Application filed April 6, 1903. Serial No. 151,292. (No model.)

To all whom it may concern:

Be it known that I, PETER DUNWALD, a citizen of the United States, and a resident of Rio, in the county of Orange and State of New York, have invented a new and Improved Railway Construction, of which the following is a full, clear, and exact description.

The invention relates to passenger transportation; and its object is to provide a new and improved railway construction which is simple and durable and more especially designed for conveniently and quickly transporting persons up and down streets in cities and other places.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement, parts of the platforms being removed. Fig. 2 is a side elevation of the improvement. Fig. 3 is a transverse section of the same. Fig. 4 is an enlarged side elevation of the flexible connection between adjacent sections of the platform-supporting rails. Fig. 5 is a sectional plan view of the same on the line 5 5 of Fig. 4, and Fig. 6 is an enlarged perspective view of part of the wheel-frame and its rack.

On the track-rails A A' of an endless track are mounted to travel grooved track-wheels B B', arranged in pairs, each pair being secured on an axle C, journaled in suitable bearings carried by a skeleton link D, and the several links of the device are pivotally connected with each other at their outer members D' to form an endless link-frame, and to this link-frame a traveling motion is given to cause all the wheels B B' to travel simultaneously on the endless track-rails A A'.

For the purpose mentioned the outer members D' of the links D are provided at their lower edges with rack-bars E, forming a continuous rack in mesh with a gear-wheel F, (see Figs. 2 and 3,) secured on a shaft F', connected with suitable machinery for imparting a rotary motion to the said shaft F' and its

gear-wheel F, so that the latter imparts a traveling motion to the rack-bars E and the endless link-frame to cause the wheels B B' to travel on the track-rails A A'. For a railway construction of considerable length a desired number of such gear-wheels and driven shafts F and F' are employed.

On each axle C between the track-wheels B and B' are secured a plurality of wheels G G' of different diameters to form with the innermost track-wheel B the platform-supporting wheels, and each of the said platform-wheels is provided with spaced annular grooves engaged at the tops of the wheels by platform-supporting rails H H', each supporting a platform I, appearing in step form, of which the lowermost is adjacent to a fixed platform J, from which the passengers pass onto the platforms and from the same when arriving at their destinations. The uppermost platform I is preferably provided near its outer edge with a railing I'.

The platform-supporting rail H is preferably in the form of a continuous strip or band, while the other rail H' is made in sections, and the ends of adjacent sections are connected with each other by a sleeve H², (see Figs. 4 and 5,) so as to render the rail continuous, and a spring H³ in each sleeve presses on the ends of the sections to prevent undue noise when the rail passes around a curve, as indicated in the top of Fig. 1. Each section of the rail H' is rigidly connected at or near its middle by a cross-arm H⁴ with the other rail H, the cross-arm being preferably in the shape of a cross, as indicated in Fig. 1; but any other desired shape may be given to the cross-arm.

Now when the shaft F' is rotated and a traveling motion is given to the link-frame carrying the wheels B B' and G G' then the wheels B B' in traveling along on the rails A A' cause rotation of their axles C, so that the wheels G G' rotate with the wheels B B'. Now as the platforms I are supported by the platform-rails H H' on the several wheels B, G, and G' it is evident that a traveling motion is given to the said platforms at a different rate of speed—that is, the platform supported from the wheel B travels at a lower rate of speed than the platform on the wheel

G, while the platform on the wheel G' travels at a higher speed than the platform on the wheel G.

Now a person desiring to travel from one point of the route to another steps from the fixed platform J at a station onto the platform I of the first wheel B, and thereby travels with this platform and acquires the latter's speed, so as to enable the person to readily step onto the next higher platform I over the wheels G and from there finally onto the fast-traveling platform I. Now when the person arrives near the destination while traveling on the uppermost platform I it is necessary for the person to first step back onto the next lower platform and finally onto the low-speed platform I, from which the person can finally alight on the fixed platform J at the destination.

The device is very simple and durable in construction, is not liable to easily get out of order, and may be constructed for cities and the like in such a manner that one side runs up a street while the other goes down the same street, or one side of the railway construction may go up one street and the other side down another street, according to local conditions.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A railway construction comprising an endless track, track-wheels traveling on the track and carrying on their axles a plurality of stepped wheels, an endless link-frame in which the wheel-axles are journaled, the link-frame carrying an endless rack, a gear-wheel in mesh with the rack, for driving the same, to cause the track-wheels to travel along the track, and platforms supported from the wheels and arranged in step form, as set forth.

2. A railway construction comprising an endless track, track-wheels traveling on the track and carrying on their axles a plurality of stepped wheels, the latter and one of the track-wheels having annular peripheral grooves, to form platform-supporting wheels, an endless link-frame in which the wheel-axles are journaled, an endless rack secured to or forming part of the link-frame, a gear-wheel in mesh with the rack, for driving the same, to cause the track-wheels to travel along the track, platform-supporting rails engaging the said grooves at the top of the platform-supporting wheels, and platforms supported on the said platform-supporting rails, the platforms being in step form, as set forth.

3. A railway construction comprising an endless track, track-wheels traveling on the track and carrying on their axles a plurality of stepped wheels, the latter and one of the track-wheels having each a pair of spaced annular peripheral grooves, an endless link-frame in which the said track-wheel axles are journaled, an endless rack carried by the

said link-frame, a gear-wheel in mesh with the rack, for driving the same, to cause the track-wheels to travel along the track, a pair of connected platform-supporting rails for each platform-wheel, engaging the grooves thereof, and platforms supported on the said platform-supporting rails, as set forth.

4. A railway construction comprising an endless track, track-wheels traveling on the track and carrying on their axles a plurality of stepped wheels, the latter and one of the track-wheels having each a pair of spaced annular peripheral grooves, an endless link-frame in which the said track-wheel axles are journaled, an endless rack carried by the said link-frame, a gear-wheel in mesh with the rack, for driving the same, to cause the track-wheels to travel along the track, a pair of connected platform-supporting rails for each platform-wheel, engaging the grooves thereof, and platforms supported on the said platform-supporting rails, one of the rails of a pair of platform-rails being continuous and the other made in sections, having sliding connection with each other, as set forth.

5. A railway construction comprising an endless track, track-wheels traveling on the track and carrying on their axles a plurality of stepped wheels, the latter and one of the track-wheels having each a pair of spaced annular peripheral grooves, an endless link-frame in which the said track-wheel axles are journaled, an endless rack carried by the said link-frame, a gear-wheel in mesh with the rack, for driving the same, to cause the track-wheels to travel along the track, a pair of connected platform-supporting rails for each platform-wheel, engaging the grooves thereof, platforms supported on the said platform-supporting rails, one of the rails of a pair of platform-rails being continuous and the other made in sections, having sliding connection with each other, and a spring for each sliding connection, as set forth.

6. A railway construction comprising an endless track, pairs of track-rails, wheels mounted to travel on the said track, links pivotally connected with each other to form a link-frame, each link having bearings for the axle of a pair of wheels to turn in and each link having a portion formed into a rack, stepped wheels secured on the axle between the said track-rail wheels, a revoluble gear-wheel in mesh with the said rack, pairs of endless platform-rails, one pair for each wheel, and platforms held on the said platform-rails, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER DUNWALD.

Witnesses:

THEO. G. HOSTER,
EVERARD BOLTON MARSHALL.