J. S. PAUL.

PLEASURE RAILWAY.

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913,046. Patented Feb. 23, 1909.

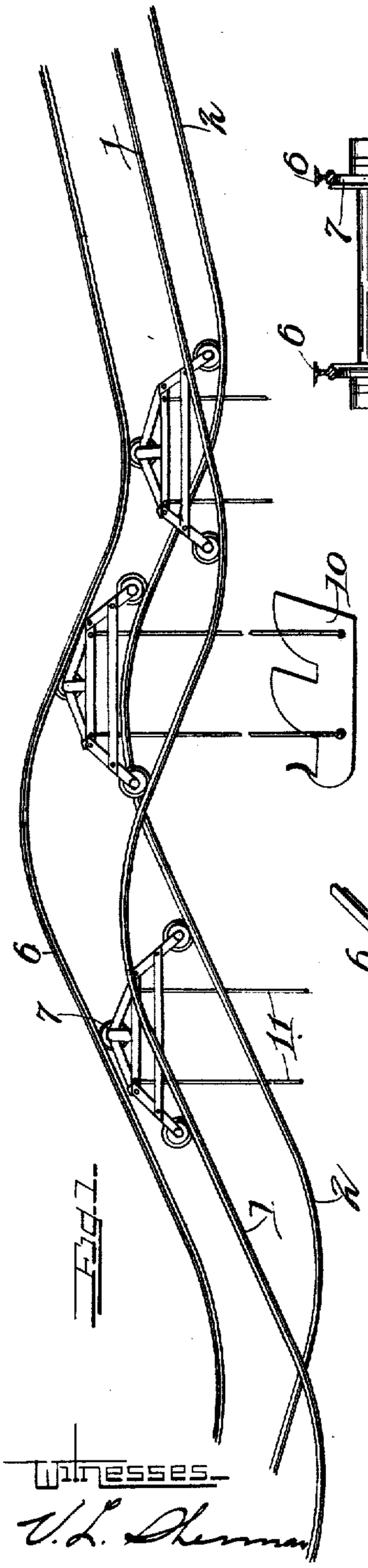

Fig. 1.

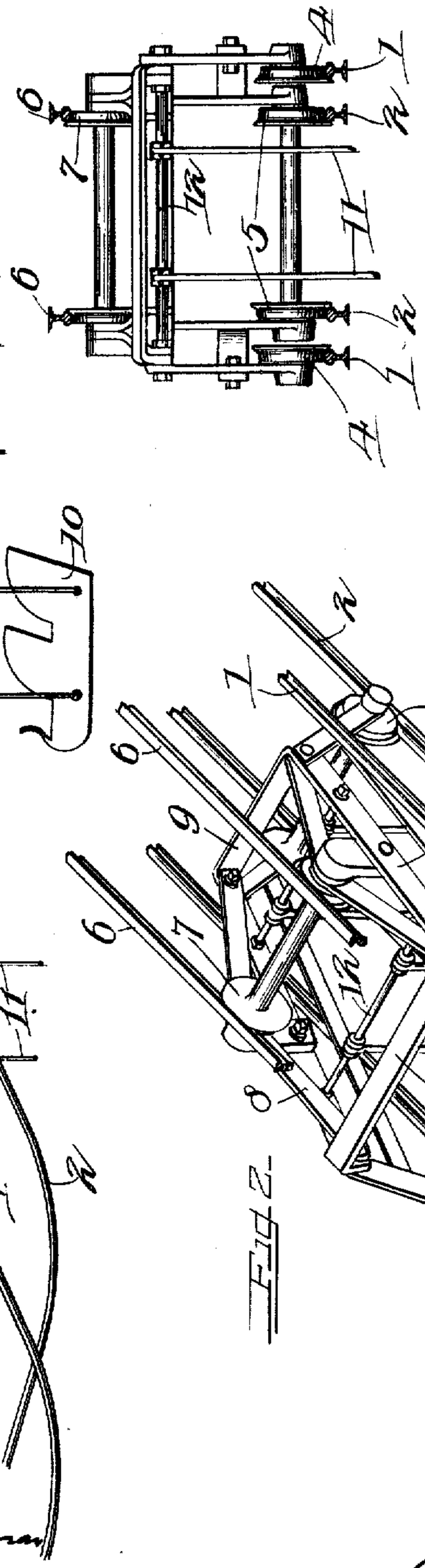

Fig. 3.

Fig. 2.

Witnesses.

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PLEASURE-RAILWAY.

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To all whom it may concern:

Be it known that I, JOHN S. PAUL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Pleasure-Railways, of which the following is a specification.

This invention relates to railways intended especially for amusement purposes and comprising a plurality of ascending and descending grades and curves. In such railways, as at present constructed, the cars running thereon pitch to an unpleasant and dangerous degree.

One of the objects of the invention is the production of a railway of the general character mentioned which shall be adapted to maintain the car traveling over the way in a substantially horizontal position at all times, notwithstanding the varying steepness of the grades and the varying radii of the curves.

Another object is the production of a car adapted to travel over said railway.

In the accompanying drawings, Figure 1 is a fragmental side elevation of a railway embodying the features of my invention. Fig. 2 is a perspective view of a car intended to travel upon said railway. Fig. 3 is a front elevation of the car, showing the rails of the railway in transverse section.

The present embodiment of my invention comprises a pair of rails 1 and a pair of rails 2 for supporting cars 3. Each of said cars comprises two wheels 4 adapted to travel upon the rails 1 and a pair of wheels 5 adapted to run upon the rails 2. In order to maintain the car in substantially horizontal position at all times, I arrange the pairs of rails 1 and 2 substantially parallel to each other, as shown in Fig. 1. It will be observed, however, that the distance of said pairs of rails from each other varies with the degree of inclination of said rails from the horizontal. When said pairs of rails extend horizontally they lie in the same horizontal plane, and the nearer they approach a vertical position, the further apart said pairs of rails are arranged. As will be apparent, this variation in the distance apart of said pairs of rails follows from the necessity for supporting the wheels 4 and 5 of the cars 3 in a horizontal position. Rails lying horizontally beneath said wheels will be in the same horizontal plane with each other, while rails extending perpendicularly to the wheel base of the car will be separated a distance substantially equal to the length of said wheel base.

As in a railway comprising both up grades and down grades the rails 1 and 2 alternately become the upper and lower rails, I place one pair of said rails within the other pair to permit of such change in relative position. The railway also preferably comprises a pair of guard rails 6 upon which run rollers 7 carried in the upper part of the car 3. The straight portions of said guard rails extend substantially parallel with the adjacent portions of the rails 1 and 2, the radii of the curves of said guard rails being such as to keep said guard rails in engagement with the rollers 3 while said rollers are passing from one straight portion to another.

In the drawings I have omitted the support for the rails 1, 2 and 6 as my invention does not relate thereto. Any common or preferred form of trestle-work or other support may be used. In the present instance the car 3 consists of side frames 8 united by the cross bars 9. The guard rollers 7 are rotatably mounted in the upper portion of the car and centrally thereof, the lines joining the centers of the wheels 4, 5 and 7 forming substantially an isosceles triangle. The car 3 obviously may be made large enough to accommodate passengers seated or standing within it. In the drawings, however, I have illustrated a cab or car 10 suspended from the car 3 by means of parallel links 11, said links being pivotally attached at their lower ends to the car 10 and at their upper ends to rods 12 extending transversely through the framework of the car 3.

It will be apparent to those skilled in the art that various mechanical embodiments of the invention are possible, and I therefore do not wish to be limited to the exact arrangement and construction shown.

I claim as my invention:

1. In a railway, in combination, two pairs of track rails, the two rails at each side of the center of the track having inclined portions, the inclined portion of one rail being parallel with the adjacent inclined portion of the other rail, the distance apart of the parallel portions of said rails varying with the inclination of said rails; and a car having four supporting wheels running upon said track rails.

2. A railway comprising two pairs of

track rails, the rails of one pair being nearer together than those of the other pair, said rails having inclined portions, the inclined portion of one pair of rails being parallel with the adjacent inclined portion of the other pair of rails, the distance apart of the parallel portions of said rails varying with the inclination of said rails; and a car having four supporting wheels running upon said track rails.

3. In a railway, in combination, four inclined track rails; a car having four wheels adapted to run upon said rails, said rails being arranged to support the wheel base of the car in a substantially horizontal position, said car having a guard roller in its upper portion; and a guard rail arranged in position to be engaged at all times by said guard roller.

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