

H. H. TUNIS.  
SINGLE TRACK RAILWAY.

(Application filed Oct. 31, 1901.)

(No Model.)

2 Sheets—Sheet 1.

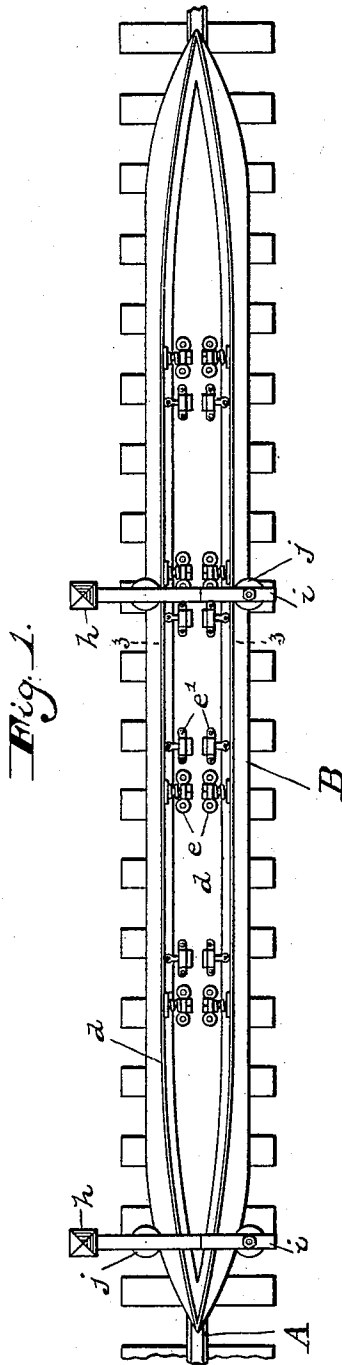


Fig. 1.

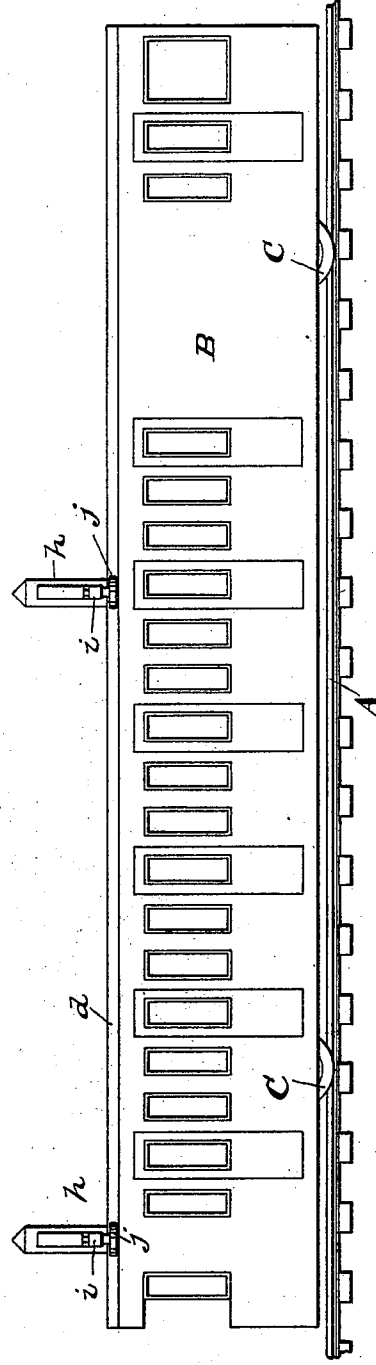


Fig. 2.

Witnesses.  
H. F. Meyer, Jr.  
Charles L. Vietach.

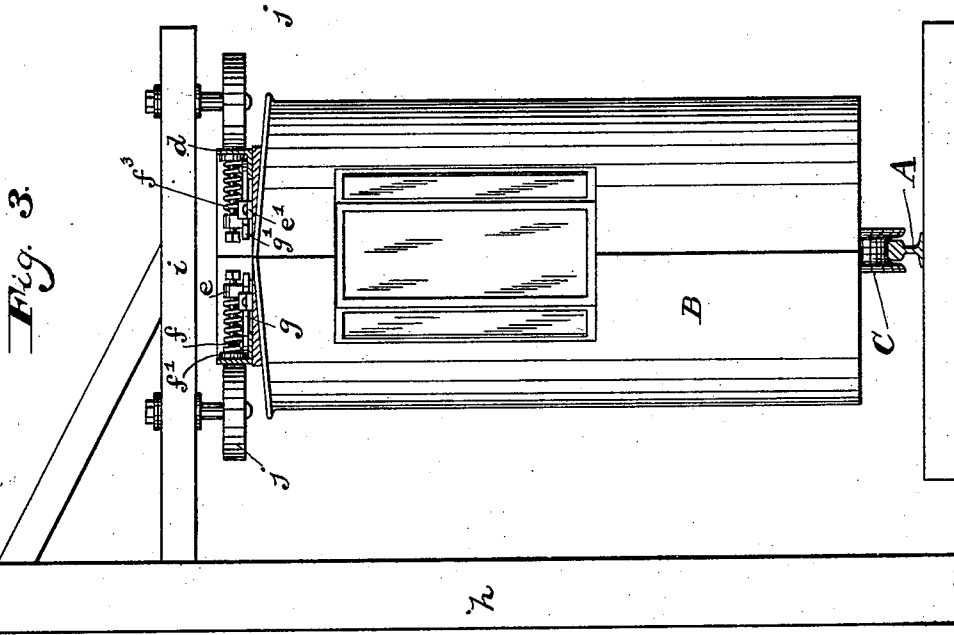
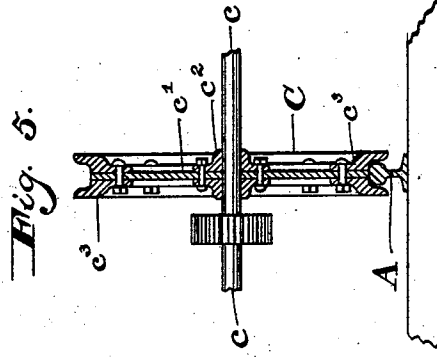
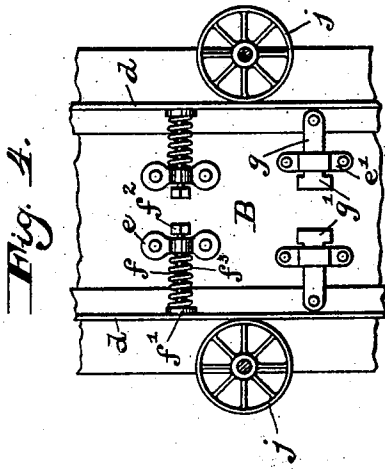
Inventor.  
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By Chas. B. Mann  
Attorney.

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Witnesses.  
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# UNITED STATES PATENT OFFICE.

HOWARD H. TUNIS, OF WINDSOR HILLS, MARYLAND.

## SINGLE-TRACK RAILWAY.

SPECIFICATION forming part of Letters Patent No. 690,539, dated January 7, 1902.

Application filed October 31, 1901. Serial No. 80,606. (No model.)

To all whom it may concern:

Be it known that I, HOWARD H. TUNIS, a citizen of the United States, residing at Windsor Hills, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Single-Track Railways, of which the following is a specification.

My invention relates to improvements in single-track railways which employ a central bearing-track and side balancing devices.

The invention consists in the novel construction and arrangement of the parts, as hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a railway and car employing my improved construction. Fig. 2 is a side elevation of same. Fig. 3 is a front elevation of a car with the balancing devices carried thereon partly in section. Fig. 4 is a plan view of a car on a larger scale and illustrates my improved balancing devices. Fig. 5 is a cross-sectional view of one of the wheels which travel on the single rail.

In the drawings, A designates the rail, which may be on a road-bed or elevated, as desired, and may be of any suitable construction. The car B is supported at either end by a flanged wheel C, which is connected to suitable power mechanism through the shaft c. This wheel C comprises a circular disk c', having a hub-section c<sup>2</sup> at each side. Secured to the disk at either side is a ring-flange c<sup>3</sup>, which flanges are bolted together through said disk, and thereby form a double-flanged or grooved wheel. The car may be of any suitable construction; but it is preferably long and narrow and at each end is pointed. On top of the car and extending lengthwise thereof are two flexible guide-rails d. These rails extend substantially from one end of the car to the other and at their ends are curved inward or toward each other, and these two curved ends of each rail are free and unsecured. The top of the car between the curved ends of the rails is provided with a plural number of guide-plates ee', which are arranged in pairs and bolted to the top of the car at either side at substantially equal distances apart. The guide-plates e each carry a rod f, which latter is provided at each end with a head f' and f<sup>2</sup>, and a spiral spring f<sup>3</sup> surrounds said rod and presses against the head f' and serves to keep same pressed firmly

against the guide-rails while the head f<sup>2</sup> on the other end of the rod serves to limit the outward movement of said rod f. Secured to the guide-rails d at suitable distances apart are sliding plates g, which are provided on their inner ends with heads g', and said plates are held in sliding contact by means of the guide-plates e'. These guide-plates e' and sliding plates g serve to keep the guide-rails d in position on the car and permit said rails to yield in a direction crosswise of the car.

Extending along the road-bed in a direction parallel with the rail A are suitable posts h, provided with cross-arms i, and said cross-arms each carry a pair of pendent rollers or pulleys j, which are preferably insulated from said cross-arm and which are adapted to be revolved in a horizontal plane. These pairs of pulleys on each cross-arm are so spaced apart that the pulleys will take against the guide-rails d as the car is moved between them and serve to balance the car at the top, and in rounding curves the shock and jar are reduced to a minimum by the rails being permitted to yield.

The cross-arms i are arranged along the road-bed at a distance with respect to the length of the car which will insure that at all times at least one pair of pulleys are in engagement with the guide-rails on the car.

Any suitable driving power may be employed.

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

1. In a single-track railway the combination of a lower bearing-rail; a car; two balance-rails secured to and carried by said car; and pulleys having a stationary position above said bearing-rail and adapted to contact with the balance-rails as the car moves along.

2. In a single-track railway the combination of a lower bearing-rail; pulleys secured to revolve in a horizontal plane above said bearing-rail; a car; two flexible balance-rails carried by said car and adapted to contact with said pulleys as the car moves along.

3. In a single-track railway the combination of a lower bearing-rail; pulleys secured to revolve in a horizontal plane above said bearing-rail said pulleys being arranged in pairs and spaced apart; a car mounted to

travel on said lower bearing-rail; two rails secured on top of the car one at either side thereof and adapted to contact with said pulleys, said rails having a horizontal movement independent of each other; and means whereby the rails are kept pressed outward.

5 4. In a single-track railway the combination of a lower bearing-rail; pulleys arranged in pairs above said bearing-rail; a car; two  
10 balance-rails secured to the top of said car;

guide-plates also secured to the car; a spring-pressed rod contacting with said balance-rails to keep the same pressed outward against said pulleys.

In testimony whereof I affix my signature 15  
in the presence of two witnesses.

HOWARD H. TUNIS.

Witnesses:

CHAS. F. SHELTON,  
EDNA H. NORTON.