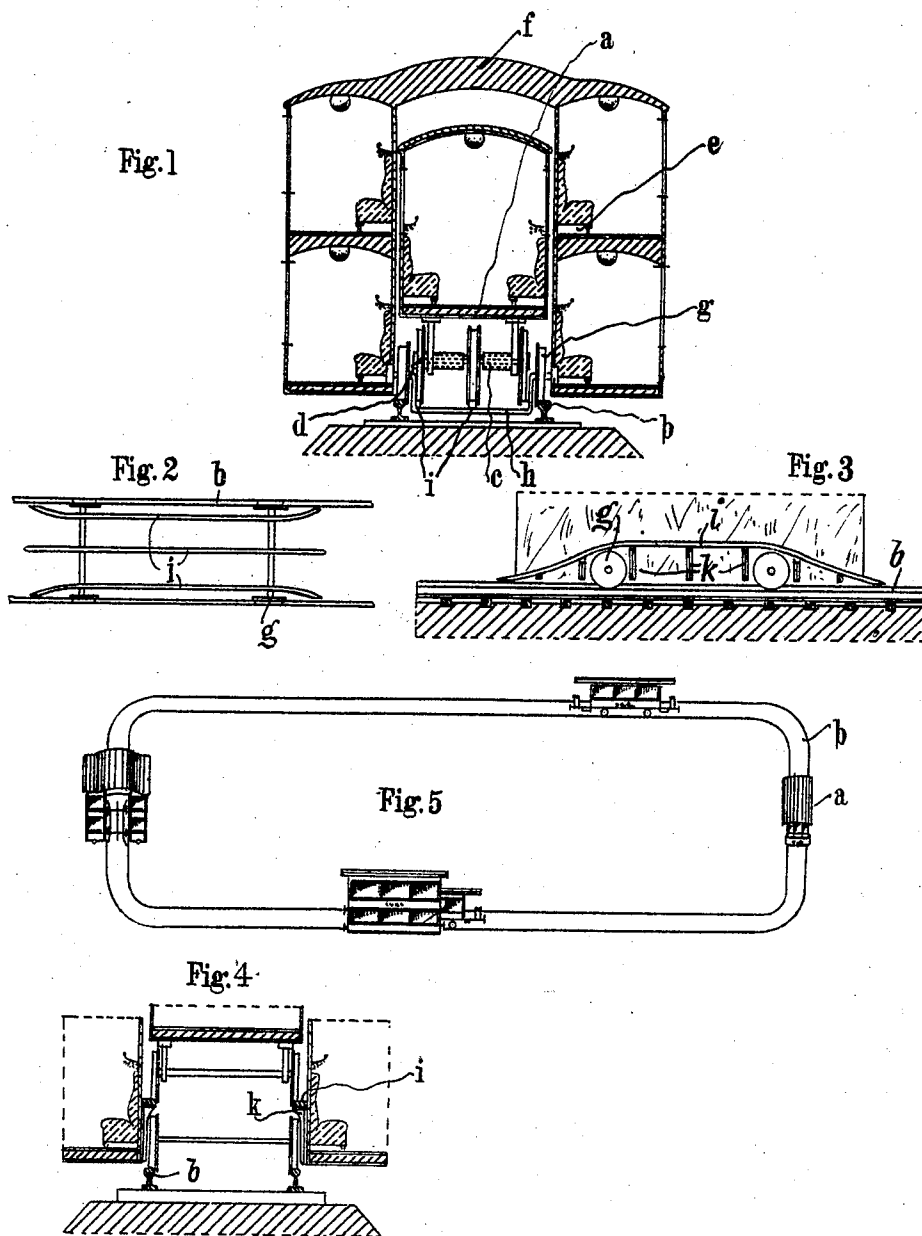


No. 844,111.

PATENTED FEB. 12, 1907.

P. VON FIRCKS.  
SINGLE TRACK RAILWAY SYSTEM.  
APPLICATION FILED MAY 3, 1906.



Witnesses:-  
Paul Arres  
Frank Simon

Inventor:-  
Paul von Fircks

# UNITED STATES PATENT OFFICE.

PAUL VON FIRCKS, OF DRESDEN, GERMANY.

## SINGLE-TRACK RAILWAY SYSTEM.

No. 844,111.

Specification of Letters Patent.

Patented Feb. 12, 1907.

Application filed May 3, 1906. Serial No. 314,987.

*To all whom it may concern:*

Be it known that I, PAUL VON FIRCKS, a subject of the Czar of Russia, and residing at Dresden, Germany, have invented certain new and useful Improvements in Single-Track Railway Systems, of which the following is a specification.

The present invention has reference to improvements in cars for railways, and relates more particularly to cars for single-track systems; and the object of the invention is to provide cars which will make the single track available at all times for trains running in either direction without the use of sidings or switches, thereby effecting a considerable saving in the construction and maintenance of the line.

The invention provides for two different cars—one a large one with a tunnel through it and a small one adapted to pass through the former when meeting it on the line.

In order to make my invention more readily understood, I will now describe it with reference to the accompanying drawings, Figure 1 of which represents a cross-section through the two cars. Fig. 2 is a plan view of the auxiliary rails carried by the larger car. Fig. 3 is a side elevation, partly in section, the upper portion which connects the two side portions of the outer car being omitted; Fig. 4, a cross-section showing another construction of auxiliary rails supported on the outer car, the upper connecting portion of said outer car being omitted. Fig. 5 shows a diagram of a closed track.

The small car *a*, of approximately the width of the track *b*, is provided with wheels *d*, mounted on compressible or telescoping axles *c*. The larger car *e* is preferably two-storied and provided with a tunnel part *f*. The wheels *g* are secured on a cranked axle *h* and run on the rails *b*. On these cranked axles are secured the auxiliary rails *i*, serving as contracted tracks for the wheels *d* of the smaller cars, so as to guide them safely past the wheels *g* of the tunnel-car, the axle *c* telescoping the while.

In Figs. 3 and 4 is shown a modification, inasmuch as here the axle *h* of the tunnel-car

is not cranked, and there are provided brackets *k* on the tunnel-car, upon which the slowly ascending and then descending rails *i* are laid. The car *a* in this instance will run up this inclined track and down again while passing through the tunnel-car, there being no necessity for telescoping axles in this construction.

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

1. In single-track railway systems, two sets of cars, one provided with a longitudinal tunnel, and the other small enough to pass through this tunnel, and means carried by the tunnel-car within the tunnel for guiding the smaller car through the tunnel-car, substantially as described.

2. In single-track railway systems, a large car adapted to run upon the rails in the usual manner having a tunnel or opening longitudinally therethrough, rails carried by the car within the tunnel, and a smaller car adapted to run upon said inner rails, through the tunnel substantially as set forth.

3. In single-track railway systems a large car adapted to run upon the rails in the usual manner having a tunnel or opening longitudinally therethrough, a smaller car adapted to pass through the tunnel-car, and means for supporting the smaller car above the axles of the tunnel-car while passing therethrough, substantially as described.

4. In single-track railway systems a large car adapted to run upon the rails in the usual manner having a tunnel or opening longitudinally therethrough, a smaller car adapted to pass through the tunnel-car, cranked axles in the tunnel-car and rails thereon to support the smaller car while passing through, substantially as described.

5. In single-track railway systems a large car adapted to run upon the rails in the usual manner having a tunnel or opening longitudinally therethrough, a smaller car adapted to pass through the tunnel-car, and means for reducing the length of the axles of the smaller car while passing through said tunnel, substantially as described.

6. In single-track railway systems, two  
sets of cars, the smaller adapted to pass lon-  
gitudinally through the larger tunnel-cars,  
telescoping axles for the running-wheels of  
5 the smaller cars, cranked axles for the run-  
ning-wheels of the tunnel-cars, and a con-  
tracted track on said cranked axles for guid-  
ing the wheels on the telescoping axles past

the wheels of the cranked axles, substan-  
tially as set forth.

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

PAUL VON FIRCKS.

Witnesses:

PAUL E. SCHILLING,  
PAUL ARRAS.