

No. 817,699.

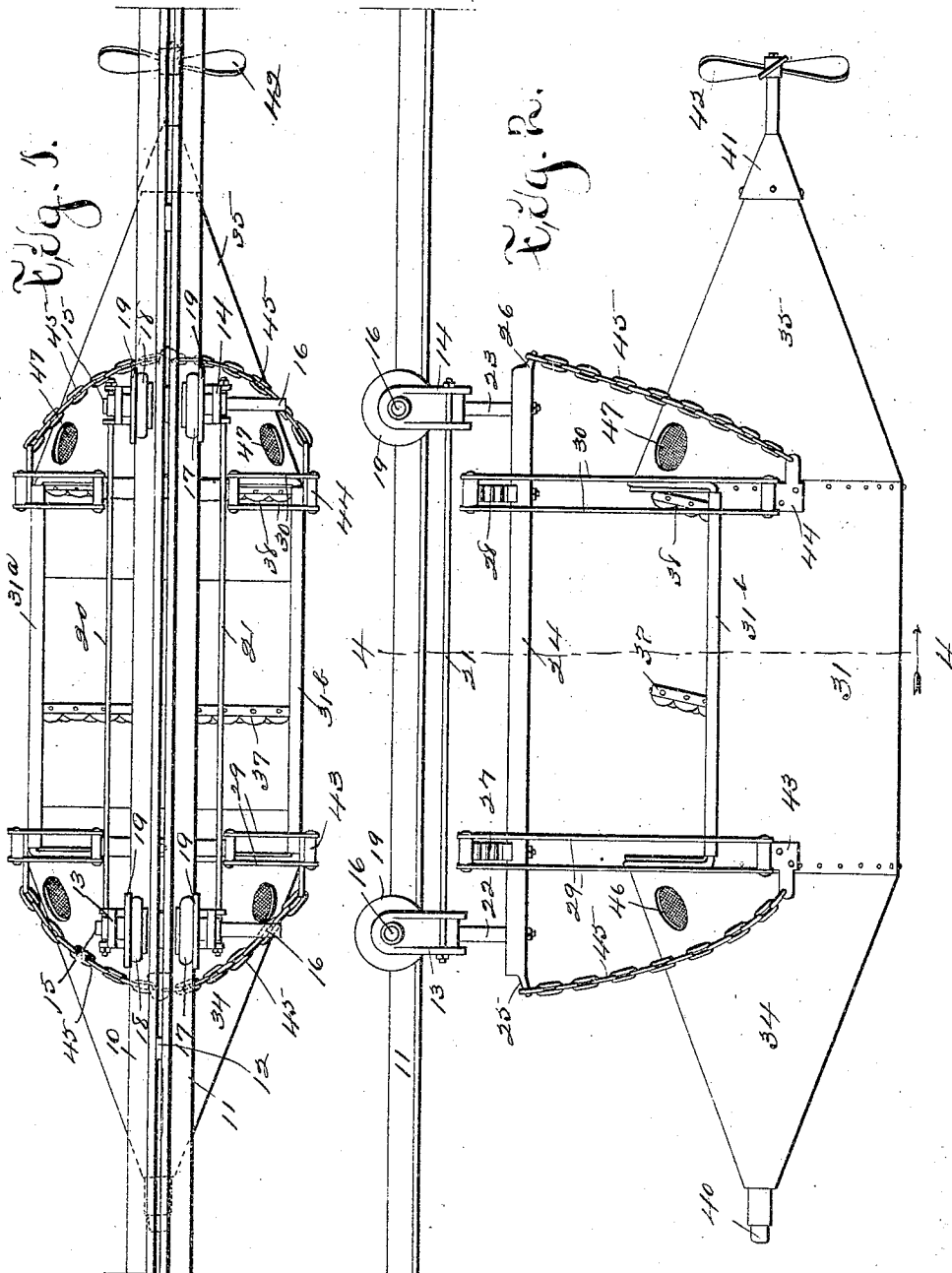
PATENTED APR. 10, 1906.

R. B. FAGEOL.

INCLINED SUSPENDED RAILWAY.

APPLICATION FILED NOV. 28, 1903. RENEWED SEPT. 21, 1905.

3 SHEETS—SHEET 1.



Attest:

R. G. Orwig.
L. H. Orwig.

Inventor
Rollie B. Fageol.
By J. H. Orwig Atty.

No. 817,699.

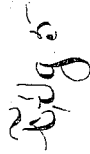
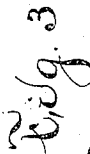
PATENTED APR. 10, 1906.

R. B. FAGEOL.

INCLINED SUSPENDED RAILWAY.

APPLICATION FILED NOV. 28, 1903. RENEWED SEPT. 21, 1905.

3 SHEETS—SHEET 2.



Attest:
R. G. Crwig.
L. H. Crwig

Invented Rollie B. Fager
 by H. Swart Atty.

No. 817,699.

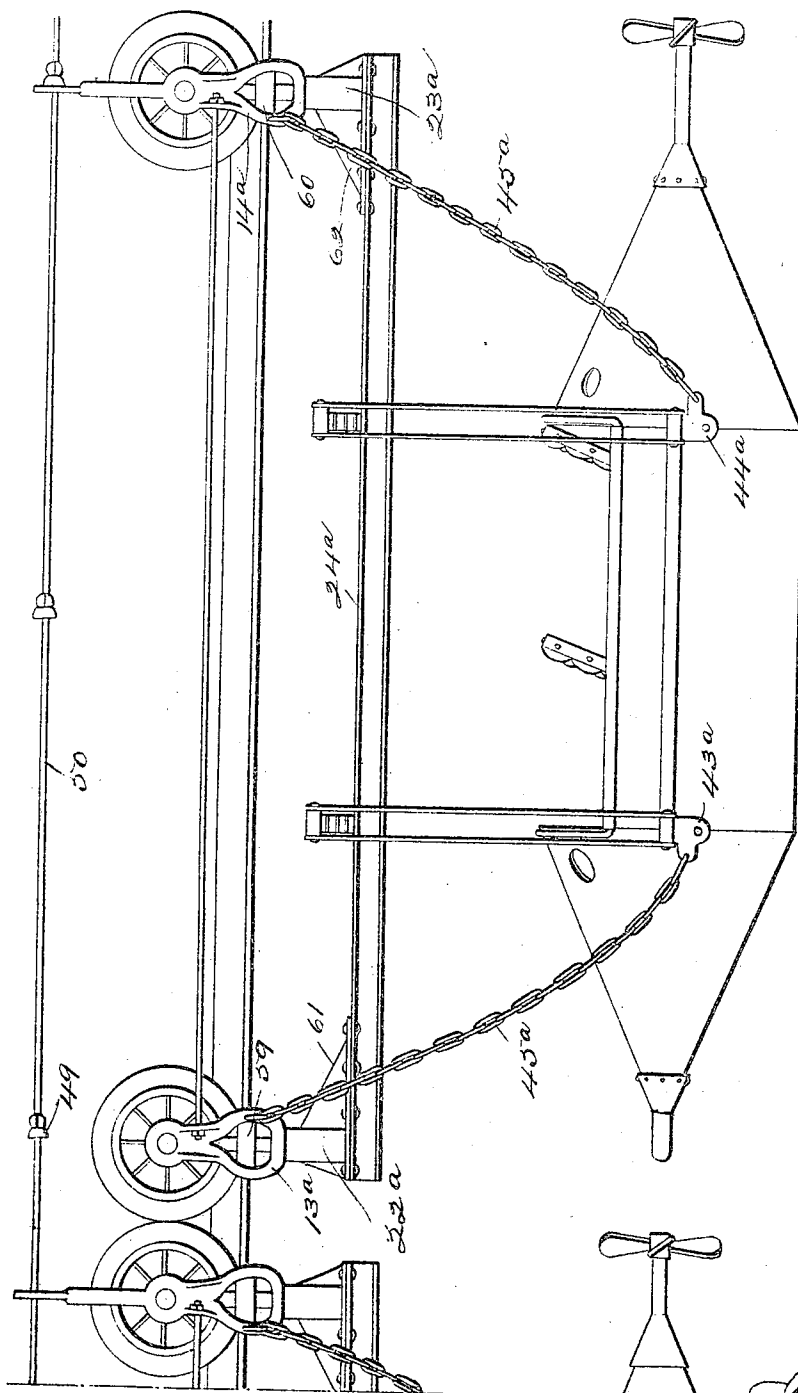
PATENTED APR. 10, 1906.

R. B. FAGEOL.


INCLINED SUSPENDED RAILWAY.

APPLICATION FILED NOV. 28, 1903. RENEWED SEPT. 21, 1905.

3 SHEETS—SHEET 3.



Attest:
R. B. Craig.
L. H. Craig.



Inventor

Rollie B. Fagiol

by W. S. W. W. atty.

UNITED STATES PATENT OFFICE.

ROLLIE B. FAGEOL, OF DES MOINES, IOWA, ASSIGNOR OF ONE-HALF TO
J. C. TATE AND CHARLES N. BRAGG, OF DES MOINES, IOWA.

INCLINED SUSPENDED RAILWAY.

No. 817,699.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed November 28, 1903. Renewed September 21, 1905. Serial No. 279,507.

To all whom it may concern:

Be it known that I, ROLLIE B. FAGEOL, a citizen of the United States of America, and a resident of Des Moines, Polk county, Iowa, have invented a new and useful Inclined Suspended Railway, of which the following is a specification.

The object of this invention is to provide improved means for conveying passengers at pleasure resorts, exhibitions, and the like, and it embodies a new and improved suspended inclined railway arranged to enable passengers to experience a continuous ride back to the starting point or station.

My invention consists of the novel features of construction and the combination herein-after set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a plan of one of my improved cars suspended from a portion of a track. Fig. 2 is a side elevation of the parts shown in Fig. 1. Fig. 3 is a vertical longitudinal section of a car employed in my device. Fig. 4 is a cross-section of the device, illustrating the means employed to drive the car upward on an incline plane. Fig. 5 is a plan illustrating the means employed to check the descent of a car. Fig. 6 is a detail of a portion of the mechanism shown in Fig. 5. Fig. 7 is an elevation illustrating parts of two cars in juxtaposition on the same track.

In the construction of the device as illustrated in Figs. 1 to 6, inclusive, the numerals 10 11 represent track-bars formed of metal bars L-shaped in cross-section with their lateral flanges lowermost and their vertical flanges in proximity of each other, spaced apart, and connected by hangers 12. The hangers 12 may be fixed to and supported by any desired form of framework or suspending devices. Track-hangers 13 14 are provided and are preferably U-shaped in cross-section. Stub-axles 15 16 are mounted rigidly in the extremities of the arms of the car-hangers 13 14 and project at each end therefrom. Wheels 17 18, formed with flanges 19, are mounted for revolution on the inner end portions of the stub-axles 15 16 and arranged for travel on the lateral flanges of the track-bars 10 11. Rods 20 21 are mounted through and connect the car-hangers 13 14 on opposite sides of the track. Stems 22 23 are swiveled in and depend from the central portions of

the car-hangers 13 14, and a beam 24 is fixed at its ends to and is supported by said stems. The beam 24 preferably is tubular and circular in cross-section as giving the greatest strength in proportion to its weight and terminates in lips 25 26, apertured transversely. Semi-elliptic springs 27 28 are mounted transversely of and fixed at their centers to the beam 24 near the end portions of said beam, and bars 29 30 are arranged in pairs and pivoted at their upper ends to the end portions of said springs respectively.

A car is provided and comprises a body portion 31, preferably formed of sheet metal curved transversely and fixed at its ends to rings 32 33 of channel-bar and end portions 34 35, preferably made of sheet metal of frustum shape and fixed at their larger open ends to said rings. The body portion 31 of the car is open at its top or semicylindrical in shape and has its top margin 31^a 31^b bent over a rod or wire to give them a finished form and appearance. A floor 36 is mounted in the lower portion of the body 31 of the car, and seats 37 38 are mounted transversely of said body. The seats 37 38 may be provided with backs and upholstered or finished in any desired manner, the curved margins 31^a 31^b forming arms therefor. A buffer-head 39 is mounted into apex of the frustum-shaped end portion 34 of the car, and a buffer 40 is mounted in and projects from said head.

A fan-stem 41 is mounted on apex of the frustum-shaped end portion 35 of the car, and a fan is mounted thereon. It is the function of the fan 42 to agitate the atmosphere at the rear of the car 31 when said car is in motion and present a pleasing and novel appearance to the car. It is the function of the buffer 40 to cushion the impact of one car with another in the event of an overtaking collision between two cars on the same track. Plates 43 44 are mounted in pairs on the sides of the car and fixed to the body 31, end portions, and to the rings 32 33 by bolts or rivets. The lower end portions of the bars 29 30 are pivoted to the plates 43 44, and thereby connect the car to the springs 27 28. Chains 45, in this instance four in number, connect with plates 43 44 to the lips 25 26 of the beam 24. The chains 45 not only serve as safety connections between the car and beam, but add a pleasing and attractive appearance to the car. Ports 46 47 are formed in the base por-

tions of the frustum-shaped ends 34 35 of the car and may be covered with sheets of wire fabric. It is the function of the ports 46 47 to ventilate the end portions of the car and at the same time present a pleasing and attracting appearance. The hanger 14 has one of its arms extended above the wheel 18 and formed as a fork 48. The fork 48 is provided on each car to be engaged by one or another of tappets 49 on a driving-cable 50. The driving-cable 50 is shown in Fig. 7 and may be driven in any desired manner. It is employed to drive the cars successively up an inclined portion of the amusement-track, on which they are suspended preparatory to the descent of said cars by gravity on other portions of said track.

I am aware that a patent has been granted to Stephen E. Jackman, dated August 25, 1903, No. 737,409, for an inclined railway, and I do not claim anything shown in said patent. However, I refer to this patent in this connection as illustrating one means of constructing track support or frame having a sinuous incline or descending portion and approximately straight ascending incline, and note this distinction that my invention comprises the use of suspended rather than supported cars and a cable engaging a fork of a car-hanger rather than the base of the car itself.

In Fig. 4 I illustrate bars 51 52, mounted on the sides of the car and arranged for engagement, either continuously or at times with guide-rollers 53 54, suitably supported to direct, determine, and control the car in respect of lateral vibration. Near the lower end portion of the sinuous incline of the track or terminal of the ride I provide brake-shoes 55 56, arranged in pairs on opposite sides of the track. The brake-shoes 55 56 are connected near their end portions by horseshoe-springs 57 58, and the initial end portions of said shoes diverge from each other, while the body portion of the shoes are in approximately parallel planes. Now a car moving in the direction of the arrow *a* in Fig. 5 will cause the outer end portions of the stub-axles 15 16 to enter between the brake-shoes and frictionally engage therewith, whereby the pressure of the horseshoe-springs 57 58 may be brought to bear on the stub-axles to the end of breaking the velocity of the car. More than one set of the brake-shoes may be employed end to end or at desired intervals to effect a suitable stopping of the cars and prevent collisions at the terminal.

In the construction illustrated in Fig. 7 I elongate the wheel-base and beam 24^a and connect the chains 45^a to the plates 43^a 44^a and the hangers 13^a 14^a. In this construction also I provide rollers 59 60 in the hangers 13^a 14^a and arrange for engagement with the outer margins of the lateral flanges of the

track-bars. In this construction also I provide braces 61 62 between the beam 24^a and the stems 22^a 23^a.

The construction shown in Fig. 7 is preferred over the other, if there can be any choice between them.

I claim as my invention—

1. An inclined suspended railway, comprising a rigid track suitably supported, rigid hangers, wheels on said hangers and adapted for travel on said track, and a cigar-shaped car flexibly suspended from and below said hangers.

2. An inclined suspended railway, comprising a suspended track, hanger-trucks on said track, a beam rigidly connecting said hanger-trucks, springs on said beam, and a car flexibly suspended from said springs.

3. An inclined suspended railway, comprising a suspended track, hanger-trucks on said track, hangers on said trucks, a beam connecting said hangers, springs on said beam, a car flexibly suspended from said springs, and auxiliary connections between said car and trucks.

4. An inclined suspended railway, comprising a suspended track, trucks on said track, hangers on said trucks, a beam connecting said hangers, springs above and transversely of said beam, bars depending from ends of said springs, a car pivotally suspended from said bars, and chains forming auxiliary connections between said car and hangers.

5. The combination of a track, trucks on said track, hangers depending from said trucks, a beam suspended from said hangers, and a cigar-shaped car suspended from and below said beam and open intermediate of its ends.

6. A suspended track, rigidly connected trucks on said track, hangers depending from said trucks, a beam suspended from said hangers and rigidly connected thereto, bars depending from said beam in pairs, a cigar-shaped car suspended between the lower ends of said bars and open at its center, seats in the open central portion of the suspended car, and chains forming an auxiliary connection between the end portions of the car and the beam.

7. An inclined suspended railway, comprising a suspended rigid track, hanger-trucks on said track, a beam rigidly connecting said hanger-trucks, springs on said beam, and a cigar-shaped car flexibly suspended from said springs.

Signed by me at Des Moines, Iowa, this 12th day of September, 1903.

ROLLIE B. FAGEOL.

Witnesses:

S. C. SWEET,
W. E. ELLIS.