

No. 780,348.

PATENTED JAN. 17, 1905.

S. E. JACKMAN.
INCLINED RAILWAY.
APPLICATION FILED OCT. 3, 1904.

2 SHEETS—SHEET 1.

Fig. 2.

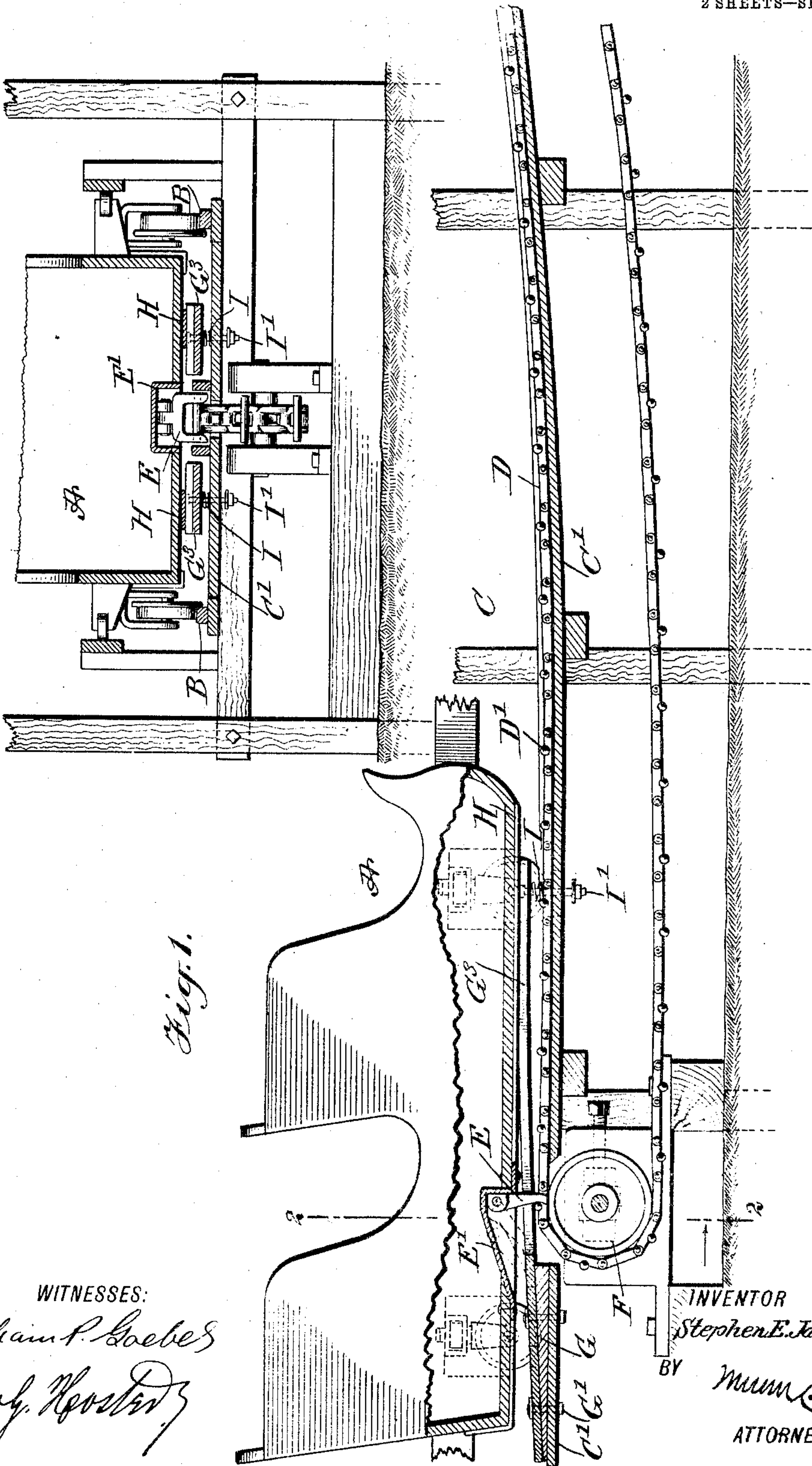


Fig. 1.

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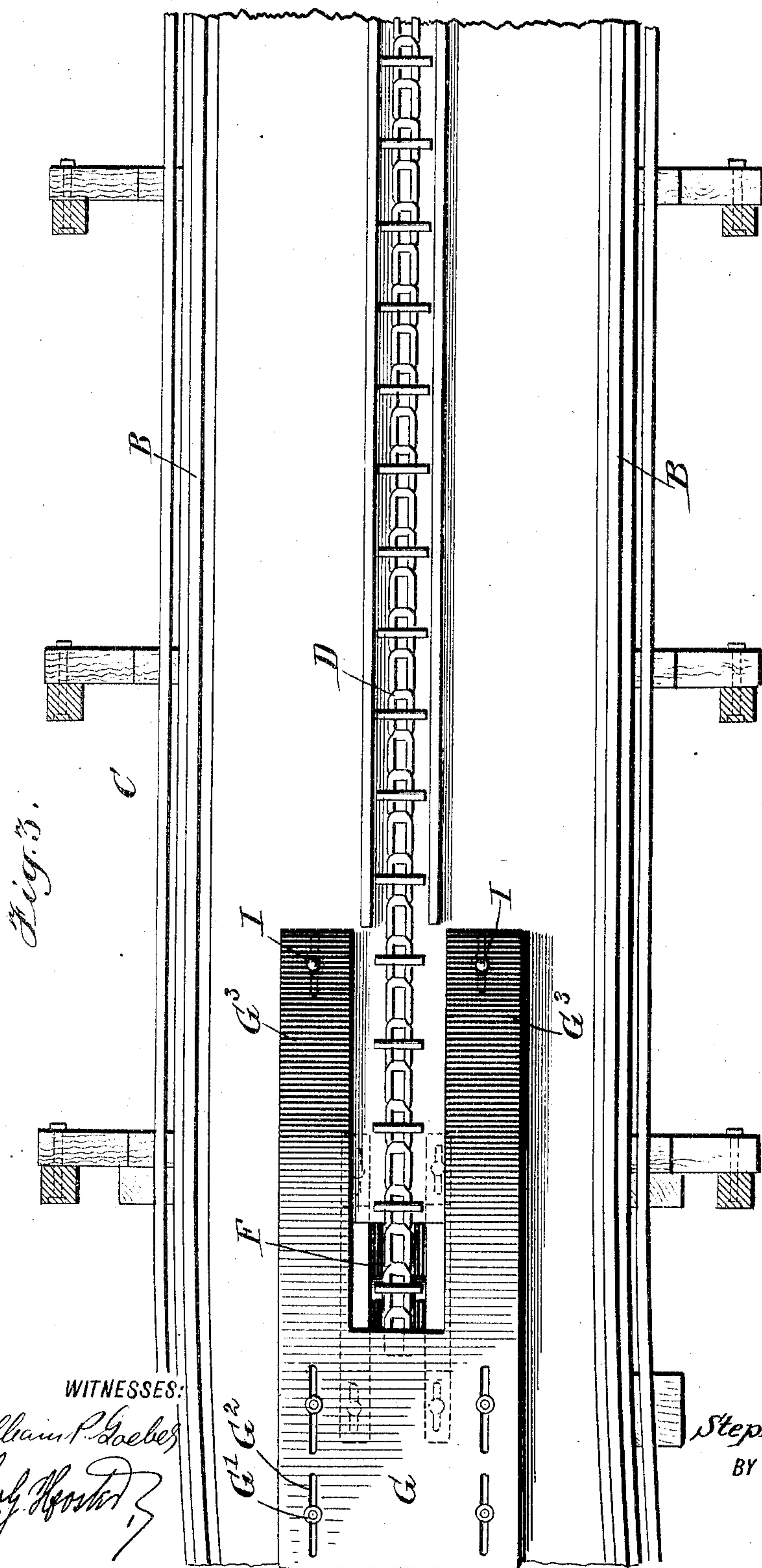
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STEPHEN EDWARD JACKMAN, OF NEW YORK, N. Y.

INCLINED RAILWAY.

SPECIFICATION forming part of Letters Patent No. 780,348, dated January 17, 1905.

Application filed October 3, 1904. Serial No. 227,001.

To all whom it may concern:

Be it known that I, STEPHEN EDWARD JACKMAN, a citizen of the United States, and a resident of the city of New York, Coney Island, borough of Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Inclined Railways, of which the following is a full, clear, and exact description.

The invention relates to switchback or pleasure railways such as are used in pleasure-resorts, exhibitions, and like places.

The object of the invention is to provide certain new and useful improvements in inclined railways whereby a car in moving in engagement with the endless traveling chain employed for carrying the car to the summit of the track is not liable to be accidentally bumped or jolted and an easy up-start of the car is had.

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 longitudinal sectional elevation of the improvement, showing the car in position on the foot of the up-track. Fig. 2 is a transverse section of the same on the line 2 2 of Fig. 1, and Fig. 3 is an enlarged plan view of the lower or foot portion of the up-track.

The car A is mounted to travel on the rails B of the track C, which latter is preferably of the endless type, having a station-section, an up-track, a down-track, and a home stretch leading back to the station-section. In the up-track is arranged an endless carrier-chain D, adapted to engage a depending arm or dog E, pivoted in a casing E', attached to the under side of the car A, so that when the said dog is in engagement with the chain the latter moves the car up on the up-track to the summit thereof and then the dog disengages the chain, and the car by its own momentum

travels down the down-run of the home stretch back to the station-section to be returned from the latter to the up-track for the next journey. Passengers embark and disembark at the station.

The carrier-chain D travels over a sprocket-wheel F, located at the foot of the up-track, and it also passes over a second sprocket-wheel (not shown) located at the summit of the up-track, and in order to impart a traveling motion to the said chain a suitable motor is provided and preferably connected with the shaft of the sprocket-wheel at the summit. As illustrated in Fig. 1, the upper run of the carrier-chain D travels on the floor C' of the track C, and in order to insure a smooth engagement of the dog E with the chain D at the time the car A moves to the foot of the up-track the following device is provided: On the floor C', somewhat in the rear of the upper run of the endless carrier-chain D and its sprocket-wheel F, is arranged an incline G, so that when the car A travels from the station-section to the foot of the up-track, then the arm or dog E travels up the incline G, and in doing so the dog is swung upwardly and rearwardly into an inclined position, as plainly indicated in dotted lines in Fig. 1, and the dog finally on dropping off the forward end of the incline G swings suddenly downward and into engagement with a cross-bar D' of the endless carrier-chain, so that the latter carries the dog, and consequently the car A, along. It is understood that without the incline G the depending dog E is liable to come in contact at its lower end with the top of a cross-bar D' at the time the latter travels around the sprocket-wheel F, and hence the cross-bar in moving to its highest point on the sprocket-wheel F tends to lift the car A, thus bumping or jolting the same and its occupants. By the arrangement described the lower end of the suddenly downwardly and forwardly swinging dog E cannot come in contact with the top of the cross-bar D', but is engaged at the rear side, thus avoiding lifting and bumping or jolting of the car and its occupants. The incline G is fastened by bolts G' to the floor C', the said bolts G' passing through elongated

slots G^2 , (see Fig. 3,) formed in the incline G to allow of adjusting the said incline lengthwise to bring the free end of the incline in proper relation to the lower end of the chain D and its sprocket-wheel F .

The car is usually pushed by an operator from the station to the foot of the up-track, and it frequently happens that the car thus acquires a different speed from that of the carrier-chain D , and hence when the chain engages the dog E for the carrier-chain to move the car A upwardly on the up-track, then a jarring or jolting of the car takes place, and in order to avoid this a friction-brake is provided in the form of spring-boards G^3 , preferably extending forwardly and integrally from the forward sides of the incline G , the said spring-boards G^3 being adapted to be engaged by rub-irons H , attached to the under side of the car A . The spring-boards G^3 extend upwardly a sufficient distance so that when the car A comes along the rub-irons H gradually engage the said spring-boards for the latter to exert sufficient pressure on the rub-irons H to check the speed of the car, without, however, bringing the car to a standstill and without producing such undue friction as to overburden the pulling-chain D . If desired, the resiliency of the spring-boards G^3 may be increased by springs I , arranged under the free ends of the said spring-boards and resting on the floor C' , the springs being coiled on bolts I' , attached to the spring-boards and extending through elongated slots in the floor C' , the said bolts serving to limit the upward swinging motion of the free ends of the said spring-boards.

The device described is very simple and durable in construction and prevents all undue jarring and jolting of the car on the latter making connection with the chain employed for carrying the car up to the summit of the up-track.

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

1. In an inclined railway, the combination with a car having a pivoted arm, of a track for the car to travel on, an endless traveling chain adapted to be engaged by the said arm, to move the car along the track, and a device fixed in

the track for bringing the said arm into proper engaging relation with the said chain.

2. In an inclined railway, the combination with a car having a depending hinged arm, of a track for the car to travel on, a chain-wheel mounted to turn, an endless carrier-chain passing over the said wheel and adapted to be engaged by the said arm, to move the said car along the track, and means in the said track adapted to be engaged by the said arm to swing the latter first rearwardly and upwardly and to then allow the arm to swing downwardly and forwardly into direct engagement with the said chain.

3. In an inclined railway, the combination with a car having a depending hinged arm, of a track for the car to travel on, a chain-wheel mounted to turn, an endless carrier-chain passing over the said wheel and adapted to be engaged by the said arm, to move the said car along the track, and an incline held lengthwise adjustable in the said track, adapted to be engaged by the said arm to swing the latter first rearwardly and upwardly and to then allow the arm to swing downwardly and forwardly into direct engagement with the said chain.

4. In an inclined railway, the combination with a car having a depending hinged arm, of a track for the car to travel on, a chain-wheel mounted to turn, an endless carrier-chain passing over the said wheel and adapted to be engaged by the said arm, to move the said car along the track, and an incline held in the said track, adapted to be engaged by the said arm to swing the latter first rearwardly and upwardly and to then allow the arm to swing downwardly and forwardly into direct engagement with the said chain, the said incline having an integral forward extension forming a spring-board for engagement with the under side of the car.

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

STEPHEN EDWARD JACKMAN.

Witnesses:

THEO. G. HOSTER,

EVERARD BOLTON MARSHALL.