J. A. MILLER.

BRAKING APPARATUS FOR PLEASURE RAILWAYS.

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979,983.

Patented Dec. 27, 1910.

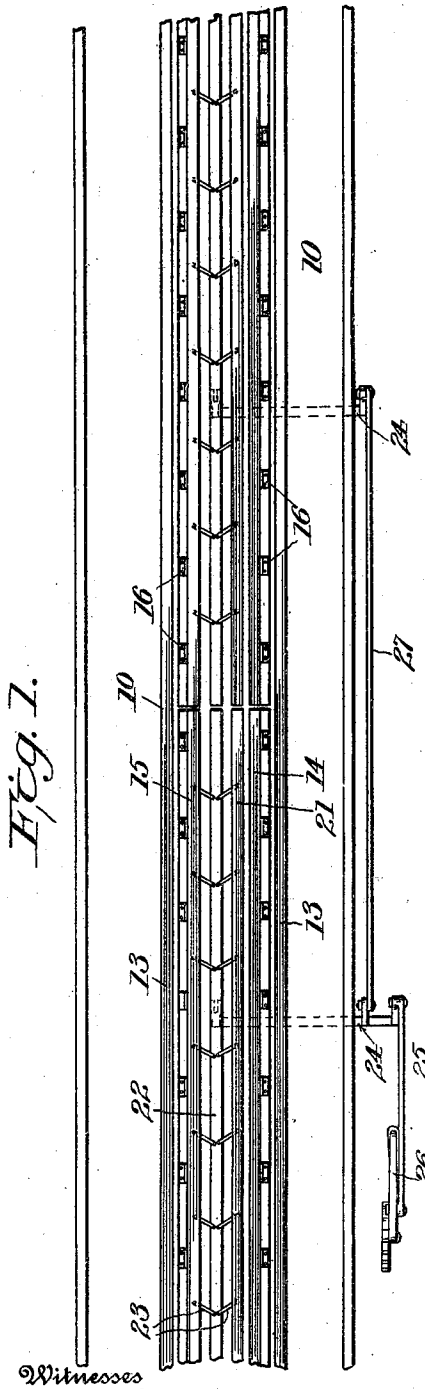

Fig. 1.

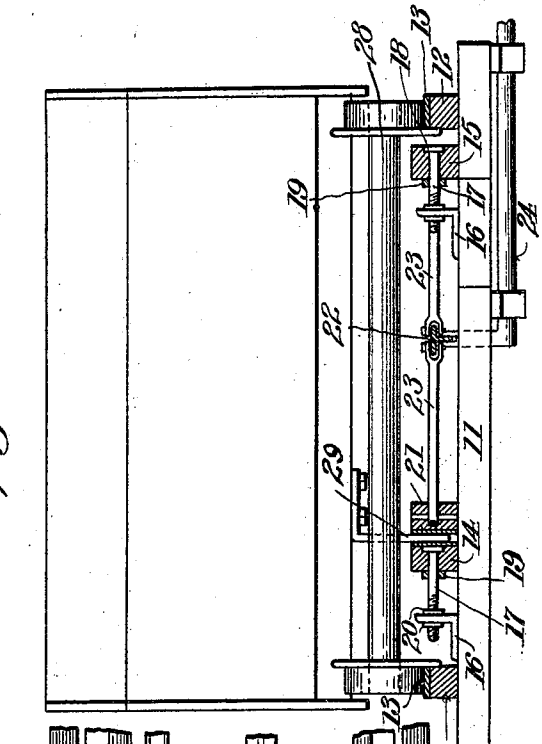

Fig. 3.

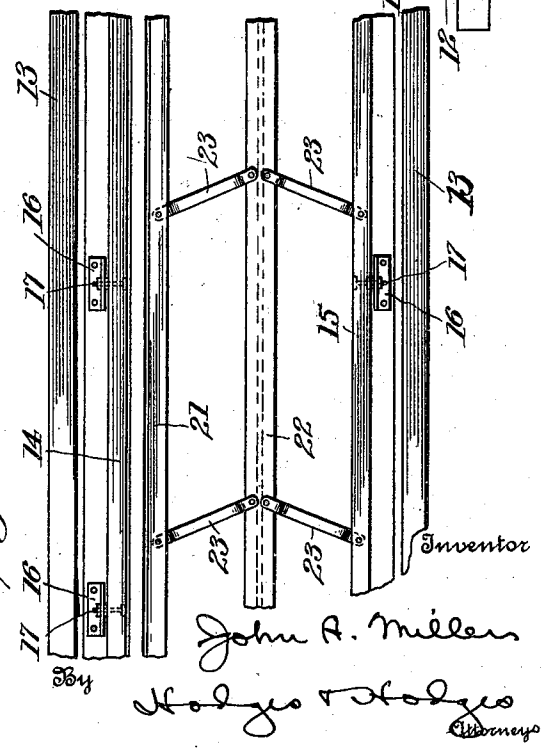

Fig. 2.

Witnesses

C. M. Walker

M. C. Smith.

Inventor

John A. Miller

By Hodges & Hodges

Attorneys

UNITED STATES PATENT OFFICE.

JOHN A. MILLER, OF HOMEWOOD, ILLINOIS.

BRAKING APPARATUS FOR PLEASURE-RAILWAYS.

979,983. Specification of Letters Patent. Patented Dec. 27, 1910.

Application filed April 19, 1910. Serial No. 556,382.

To all whom it may concern:

Be it known that I, JOHN A. MILLER, of Homewood, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Braking Apparatus for Pleasure-Railways, of which the following is a specification.

This invention relates to certain new and useful improvements in braking apparatus designed particularly for use in connection with pleasure railways, although I do not desire to limit the use of the invention in this particular.

In pleasure railways as now constructed the cars are caused to travel at excessively high speeds down steep inclines, and it is therefore necessary to gradually check the momentum of the vehicle in order to avoid danger to the passengers and injury to the rolling stock and road bed.

The object of the present invention is to provide improved means for smoothly and gradually bringing the car to a stop at the end of the trip without jarring, or other inconvenience, to the passengers, and without undue strains upon the rolling stock or road bed.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 is a plan view of a portion of a railway illustrating my invention. Fig. 2 is an enlarged detail view. Fig. 3 is a transverse sectional view illustrating a car in end elevation.

Referring to the drawing, 10 designates the road bed which may be of any suitable or preferred structure, that illustrated being provided with the beams 11 which support the timbers 12 to which the rails 13 are secured. Located between the rails are two stationary, longitudinally extended members 14, 15 which rest upon the timbers or other supports 11 and are adjustably connected to angle irons 16 by means of bolts 17. Said bolts are provided with heads 18 fitting within recesses in members 14 and 15, and are clamped to said members by nuts 19. The bolts 17 pass through suitable openings in the angle bars 16 and the positions of the members 14 and 15 are varied by adjusting the lock nuts 20 working on said bolts. When adjusted the members 14 and 15 are held immovably in position by the angle bars 16 and bolts 17.

The movable member of the brake comprises a bar 21 arranged adjacent member 14 and corresponding in length with the latter, said bar being arranged to slide upon the road bed or timbers 11. This sliding movement is imparted to bar 21 by means of a toggle member 22 connected by toggle levers 23 with the member 15 and bar 21. The throw of the bar 21 is regulated by adjusting the position of bar 15, in the manner heretofore described. The toggle member is shifted by means of an operating lever 24 connected by a link 25 with a hand lever 26 located at any suitable or preferred point. Where a plurality of brakes are arranged in series, as illustrated in Fig. 1, it is preferred to connect the hand levers 26 in any suitable manner such as rod 27, so that two sets of brakes may be operated in unison.

The car or other vehicle may be of any preferred construction provided with the usual truck 28 and a depending shoe or rib 29, the latter being so placed as to pass between the member 14 and the bar 21.

In practice, as the car approaches that portion of the track provided with the brake, (such approach being usually at exceedingly high speed), an attendant moves the hand lever 26, thereby shifting the toggle member 22, and through the toggle levers 23, moving the bar 21 toward member 14. The position of member 14 is so adjusted that the shoe or rib 29 will press bar 21 slightly away from the said member 14, leaving a space sufficiently wide to permit of the passage of the said rib or shoe, and yet so restricted that the function of the member 14 and bar 21 upon the rib or shoe will check the momentum of the car and gradually bring the latter to a full stop without shocks or jars.

I claim as my invention:—

1. In a brake of the character described the combination with a railway track of a stationary member located between the rails of said track, and a movable member cooperating with said stationary member, said members being constructed to engage a moving vehicle to arrest the movement thereof.

2. A brake of the character described comprising a stationary member, and a mov-

able member coöperating therewith, said members being constructed to engage a moving vehicle to arrest the movement thereof, and means for adjusting the position of said stationary member.

3. A brake of the character described comprising a stationary member, and a movable member coöperating therewith, said members being constructed to engage a moving vehicle to arrest the movement thereof, means for adjusting the throw of said movable member.

4. A brake of the character described comprising a stationary member, and a movable member coöperating therewith, said members being constructed to engage a moving vehicle to arrest the movement thereof, means for adjusting the position of said stationary member, and means for regulating the throw of said movable member.

5. In a brake of the character described the combination with a railway track of a stationary member located between the rails of said track, and a movable member cooperating with said stationary member, said members being constructed to engage a moving vehicle to arrest the movement thereof, and a toggle member for operating said movable member.

6. A brake of the character described comprising a stationary member, and a movable member coöperating therewith, said members being constructed to engage a moving vehicle to arrest the movement thereof, means for adjusting the position of said stationary member, and a toggle member for operating said movable member.

7. A brake of the character described comprising a stationary member, and a movable member coöperating therewith, said members being constructed to engage a moving vehicle to arrest the movement thereof, a toggle member for operating said movable member, and means for adjusting said toggle member to vary the throw of the movable member.

8. A brake of the character described comprising a stationary member, and a movable member coöperating therewith, said members being constructed to engage a moving vehicle to arrest the movement thereof, means for adjusting the position of said stationary member, a toggle member for operating said movable member, and means for adjusting said toggle member.

9. In a brake of the character described the combination with a railway track of a stationary member located between the rails of said track, and a movable member coöperating with said stationary member, said members being constructed to engage a moving vehicle to arrest the movement thereof, a toggle member for operating said movable member, a hand lever, and connections between said hand lever and said toggle member.

10. The combination with a vehicle provided with a shoe, of a brake comprising a stationary member, a movable member constructed to frictionally engage said shoe.

11. The combination with a vehicle provided with a shoe, of a brake comprising a stationary member, a movable member constructed to frictionally engage said shoe, and a toggle member for operating said movable member.

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

JOHN A. MILLER.

Witnesses:
CHAS. L. ALEXANDER,
FREDERICK INGERSOLL.