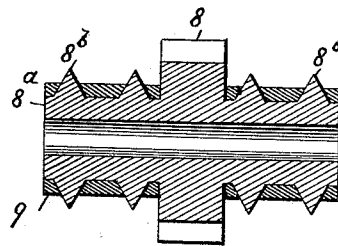
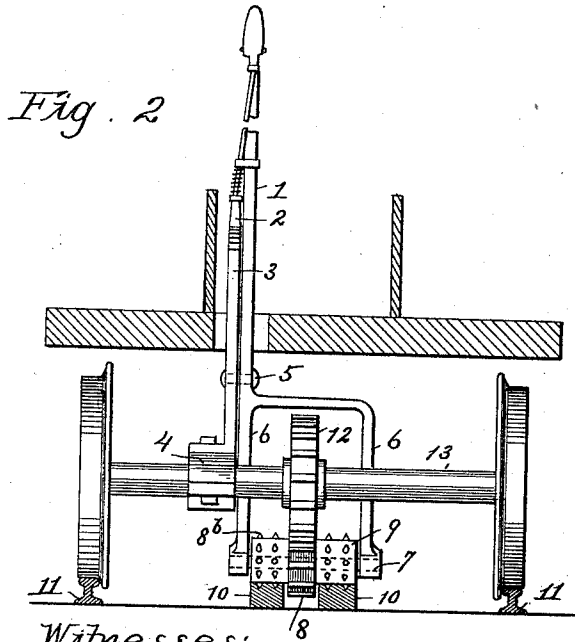
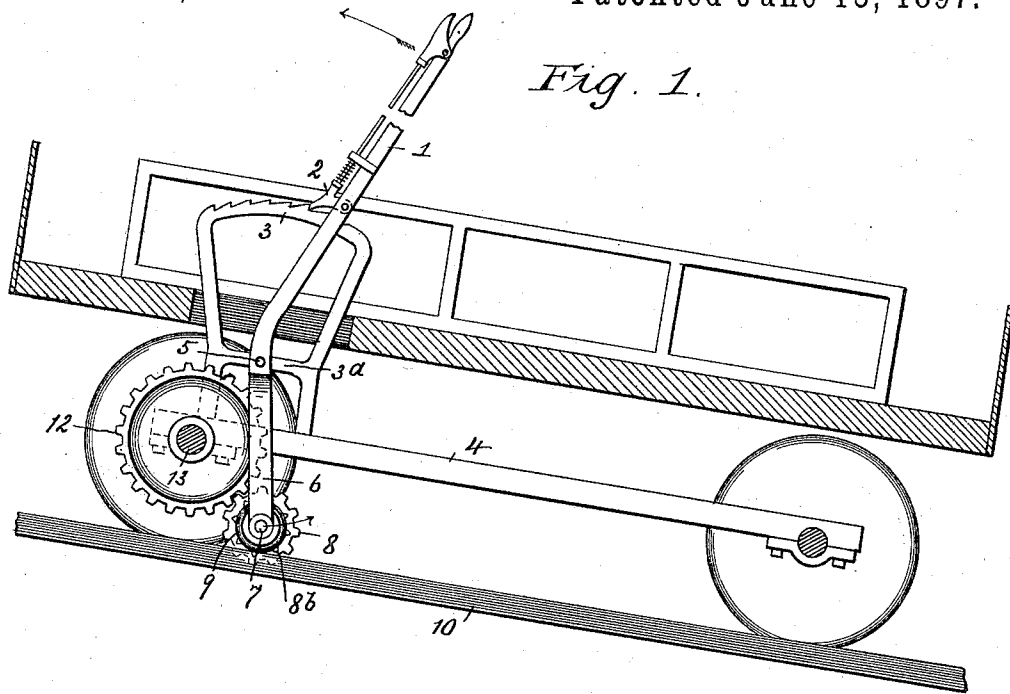


G. M. McLAUGHLIN.
EMERGENCY BRAKE.

Patented June 15, 1897.



Witnesses:

H. E. Price.
G. Y. Thayer.

Inventor:

Geo. M. McLaughlin

By *H. Fischer*

Atty.

UNITED STATES PATENT OFFICE.

GEORGE M. McLAUGHLIN, OF KANSAS CITY, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF TWENTY-NINE THIRTY-SECONDS TO AUGUSTA C. HENLEY, GEORGE W. HOUSE, HARRY B. YATES, AND LOREN G. ROWELL, OF SAME PLACE.

EMERGENCY-BRAKE.

SPECIFICATION forming part of Letters Patent No. 584,559, dated June 15, 1897.

Application filed November 16, 1896. Serial No. 612,320. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. McLAUGHLIN, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Emergency-Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to emergency-brakes for passenger-coaches, and is designed more particularly for use on the inclined portions of street-railways, where the ordinary brake-shoe fails to hold the car when accident occurs to its motive power.

With this object in view my invention may be said to consist in the novel arrangement and combination of parts hereinafter described, and pointed out in the claims.

In the drawings which illustrate the invention, Figure 1 is a longitudinal sectional view of a car-body provided with my brake, its operation being shown by dotted lines. Fig. 2 is a sectional front elevation of same. Fig. 3 is a cross-section of the small cog-wheel.

In constructing my invention I employ a lever 1, which is provided with the usual spring-actuated pawl 2, which engages the notches on a segment 3, secured to a frame 4 upon the car-axles. Lever 1 is pivotally secured to a cross-bar 3^a on the segment by a pin 5, and its lower bifurcated end 6 is provided with a shaft 7. Journaled on said shaft 7 is a small cog-wheel 8, having a hub 8^a, which extends from the opposite sides thereof to the inner sides of the bifurcated portion of the lever. The surface of this hub is provided with spikes 8^b and is also covered with rubber or rawhide 9, through which the points of the spikes project. 10 10 indicate stringers, which are centrally disposed between the tracks 11, with sufficient space between them to permit the passage of the small cog-wheel 8. Said stringers extend the full length of the incline and are constructed of wood or other material which will allow the spikes to embed themselves when the brake is brought into action.

12 indicates a large cog-wheel rigidly se-

cured to the axle 13 in such a position that it may be engaged by the pinion when necessary. 50

The operation of my brake is substantially as follows: When the car is traveling the incline and its motive power becomes disarranged, the smaller cog-wheel is thrown in engagement with the larger one by drawing back upon the lever, which is pivoted at such a point as to bring the hub of the smaller cog-wheel in contact with the stringers 10 and embed the spikes 8^b therein. The engagement of the cog-wheels rotates the smaller one in the reverse direction from which the car is traveling and the car is soon brought to a standstill by the assistance of the spikes and the friction between the stringers and hub 8^a. Thus the power of gravity, which would send the car down the incline with increasing speed, is utilized to assist in saving the car from destruction. 60

It will be seen from the above description that I have produced a simple brake, inexpensive to manufacture, and one which is efficient for the purpose intended. 70

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is— 75

1. In a brake, a lever bifurcated at its lower end, a wheel journaled therein provided with a hub which extends from the sides thereof, stringers extending along the travel of said wheel and adapted to be frictionally engaged by the hub thereon; in combination with a larger wheel rigidly secured to a rotatable axle in such a position that it may be contacted with by the first-mentioned wheel, substantially as described. 85

2. In a brake, a lever bifurcated at its lower end, a cog-wheel journaled therein, provided with a hub having spikes disposed around its periphery; stringers which are adapted to be engaged by the hub and spikes; and a larger cog-wheel rigidly secured to a rotatable axle which is rigidly journaled in the carrying-wheels, substantially as described. 90

3. In a brake, a lever bifurcated at its lower end; a cog-wheel journaled therein provided with a hub having spikes disposed around its 95

periphery, and a rubber or other analogous
covering for said hub; stringers which are
adapted to be engaged by said hub and spikes;
and a larger cog-wheel rigidly secured to the
5 rotatable axle of the carrying-wheels, in such
a position that it may be engaged by the
smaller cog-wheel, substantially as described.

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

GEORGE M. McLAUGHLIN.

Witnesses:

JNO. A. MOORE,
F. G. FISCHER.