

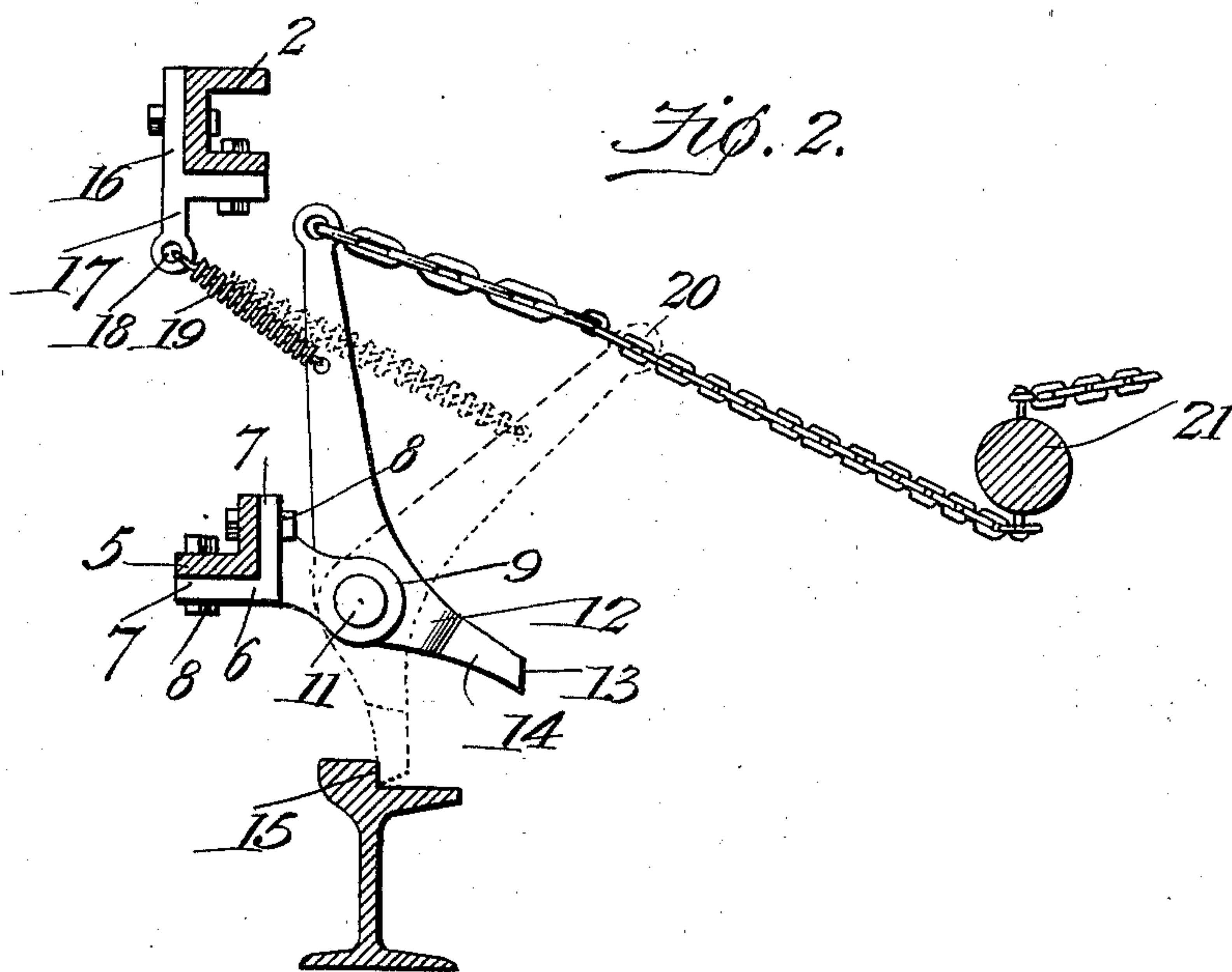
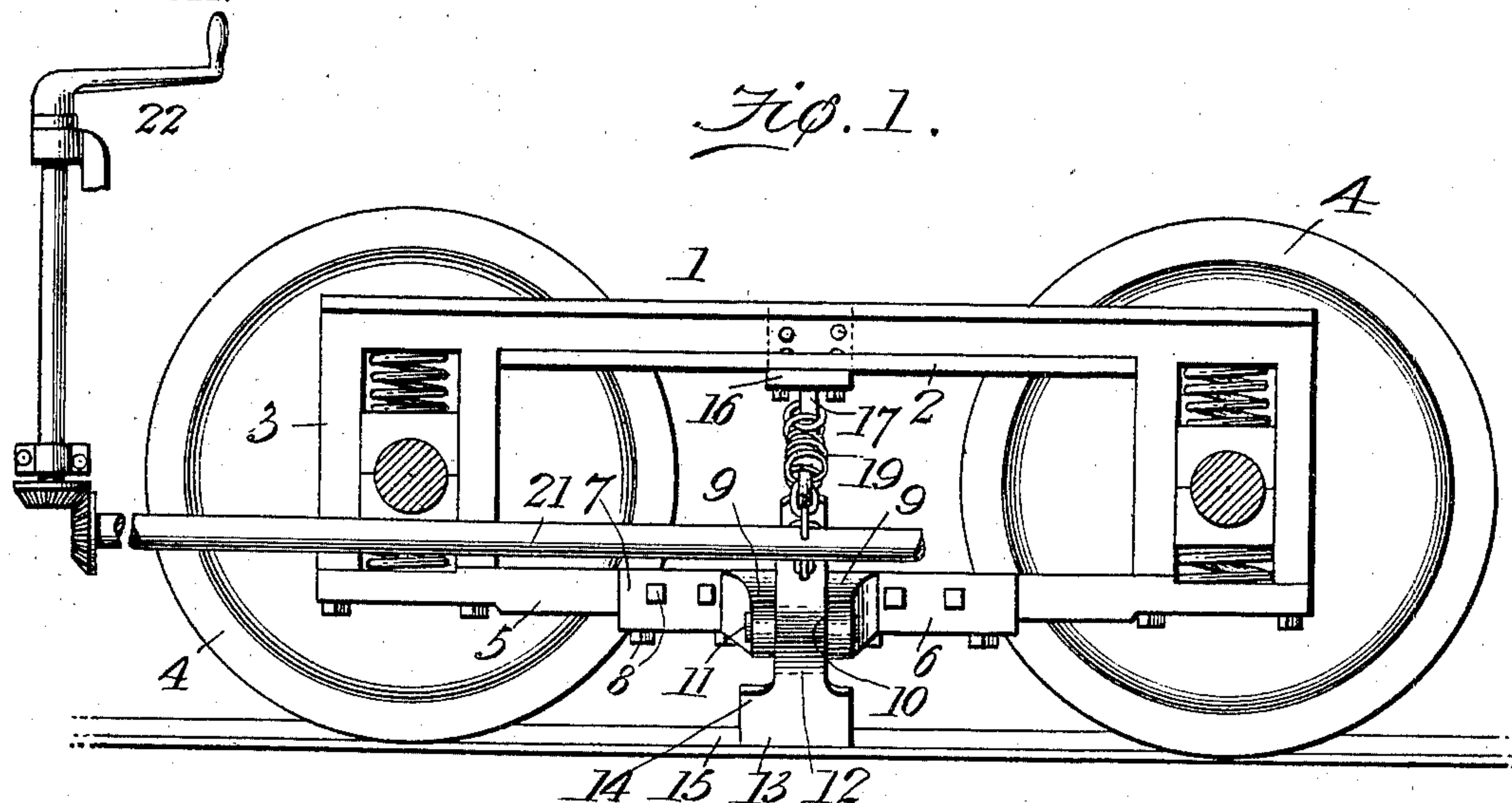
No. 757,006.

PATENTED APR. 12, 1904.

M. A. WODAL.  
BRAKE.

APPLICATION FILED OCT. 20, 1903.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

MICHAEL A. WODAL, OF CAMDEN, NEW JERSEY.

## BRAKE.

SPECIFICATION forming part of Letters Patent No. 757,006, dated April 12, 1904.

Application filed October 29, 1903. Serial No. 179,054. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL A. WODAL, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented a new and useful Brake, of which the following is a specification.

This invention relates to certain improvements in brakes for railway-cars and other vehicles, and more particularly to an emergency-brake especially designed for use on trolley-cars to check the speed of the car in case the ordinary brakes fail to operate and the car gets beyond control of the motorman.

A further object of the invention is to provide a pair of brake-shoes pivoted to the car-truck at points intermediate the wheels thereof, said shoes being normally elevated and so disposed that when the brakes are applied they will engage the track-rails, and thereby check the motion of the car.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a car-body, showing my improved emergency-brake applied thereto and in contact with the rail; and Fig. 2 is a transverse sectional view of the same, showing the brake-shoes elevated or in inoperative position.

Similar numerals of reference indicate corresponding parts in both figures of the drawings.

1 designates the frame of a car-truck comprising the side beams 2 and pedestals 3, in which are journaled in any suitable manner the truck-wheels 4, said pedestals being connected by angular tie-bars 5, as shown. Mounted on each side of the truck-frame and preferably at points intermediate the wheels 4 are supporting-brackets 6, provided with angularly-disposed longitudinal flanges 7, which

embrace the tie-bars 5, being secured thereto in any suitable manner, as by bolts or similar fastening device 8. The brackets 6 are provided with extensions 9, the ends of which are bifurcated, as shown at 10, and pivoted in any suitable manner between the bifurcated ends of said extensions, as by pins or bolts 11, are brake-shoes 12, the lower end of each of which is inclined or beveled, as shown at 13, and provided with laterally-projecting wings 14, adapted to form a broad contact-surface for engagement with the track-rails 15, as will be more fully explained hereinafter. Secured to the side bars 2 of the truck and immediately above the supporting-brackets 6 are angular plates 16, each provided with a depending ear or lug 17, having a terminal opening 18, in which is fastened one end of a preferably coiled spring 19, the opposite end of the spring being secured in any suitable manner to the upper portion of the corresponding brake-shoe, said spring serving to normally hold the shoe in an elevated position and out of contact with the track-rail, as clearly shown in Fig. 2.

As a means for tilting the shoe, and thereby applying the brake, I provide a chain or other flexible medium 20, connected to the upper portion of each brake-shoe and to a centrally-disposed rod or shaft 21, extending longitudinally of the car-truck and geared in any suitable manner to crank-shafts 22, located one on each end of the car, so that by turning either crank-shaft it will cause the chain 20 to be wound on the shaft 21, and thereby throw the brake-shoes in engagement with the track-rail.

From the foregoing description the construction of the device will be readily understood, and the operation thereof may be briefly described as follows: Should the ordinary brakes for any reason fail to respond and the car become unmanageable, the excessive speed thereof may be quickly checked by turning either crank-shaft 22, which operation rotates the shaft 20 and forces the brake-shoes against the tension of the springs 19 into engagement with the flange on the track-rails, causing the car to be quickly brought to a standstill, the



brake-shoes returning to their normal elevated position as soon as released.

A brake constructed as described may be quickly placed in position on any car, and being arranged beneath the truck does not detract from the general appearance thereof, while the shoe being normally elevated the liability of the same catching on obstructions in the road-bed is effectually obviated.

By having the lower portion of the brake-shoe widened and the face thereof inclined or beveled a better gripping-surface is presented, while the manner of supporting the shoe renders it durable and exceedingly effective in operation.

It will of course be understood that as many of the emergency-brakes may be used on a car as are deemed necessary, and while I have shown said brakes applied to the truck-frame between the wheels thereof it is obvious they may be secured at any other position thereon desired.

Having thus described the invention, what I claim is—

1. In a car-brake, the combination with a truck-frame, a supporting-bracket secured thereto, a brake-shoe pivoted to said bracket, means for forcing the brake-shoe into engagement with the side of the track-rail, and a spring for returning said shoe to its normal position.

2. In a car-brake, the combination with a truck-frame, a supporting-bracket provided with angularly-disposed longitudinal flanges secured to said frame, a brake-shoe pivoted to the bracket, means for forcing the brake-shoe into engagement with the side of the track-rail, and a spring one end of which is

secured to the truck-frame the opposite end thereof being fastened to said shoe.

3. In a car-brake, the combination with a truck-frame, a supporting-bracket secured thereto, a brake-shoe having its contact-face inclined or beveled pivoted to said bracket, means for forcing the shoe into engagement with the side of the track-rail, and means for returning said shoe to its normal position.

4. In a car-brake, the combination with a truck-frame, a supporting-bracket provided with a bifurcated extension secured to the frame, a laterally-disposed brake-shoe pivoted between the bifurcated ends of said extension, means for forcing the shoe into engagement with the side of the track-rail, and a spring secured to the frame and shoe respectively for returning the latter to its normal position.

5. In a car-brake, the combination with a truck-frame, a supporting-bracket secured thereto, a laterally-disposed brake-shoe provided with an enlarged head having an inclined or beveled contact-face pivoted to the bracket, and means for forcing the brake-shoe into engagement with the side of the track-rail.

6. In a car-brake, the combination with a truck-frame, of a supporting-bracket secured thereto, a laterally-disposed brake-shoe pivoted to the bracket, an operating-shaft, and a flexible connection between the shoe and the operating-shaft.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MICHAEL A. WODAL.

Witnesses:

FRANZ FRANZ,  
JOSEPH BAUMAN.