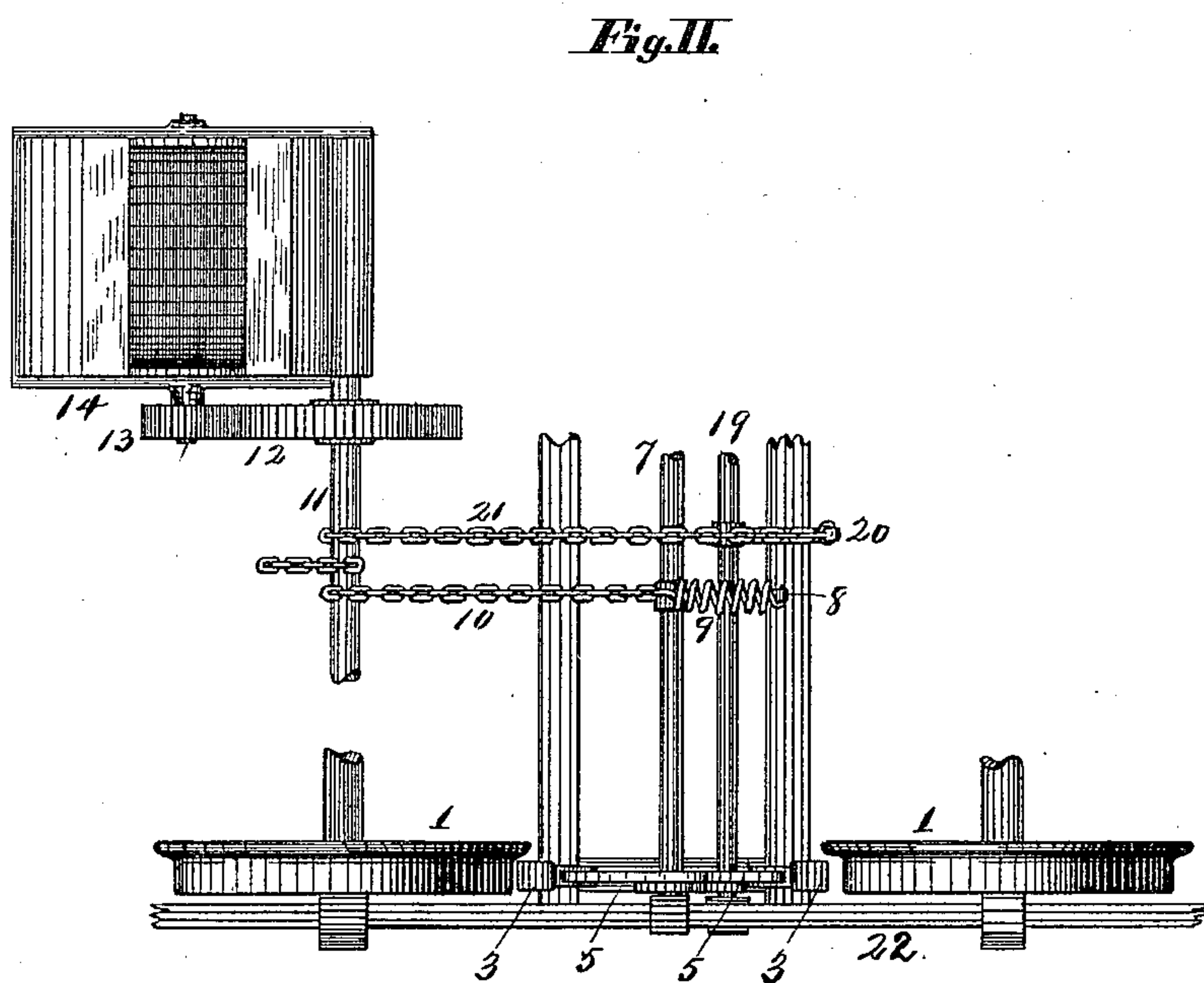
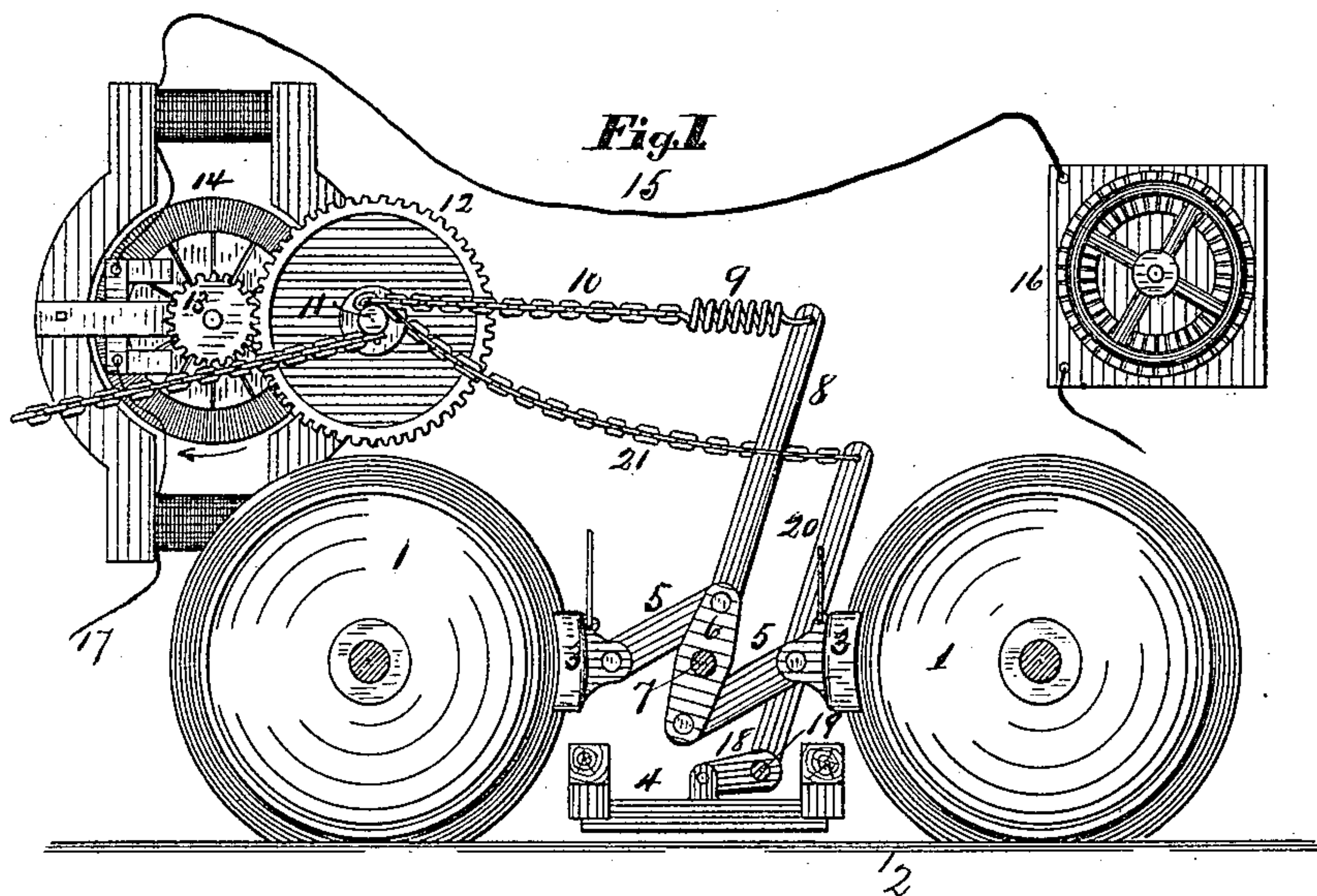


(No Model.)

LA MOTTE C. ATWOOD.
ELECTRIC CAR BRAKE.

No. 461,808.

Patented Oct. 27, 1891.



Attest:
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UNITED STATES PATENT OFFICE.

LA MOTTE C. ATWOOD, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE ATWOOD ELECTRIC COMPANY, OF EAST ST. LOUIS, ILLINOIS.

ELECTRIC CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 461,808, dated October 27, 1891.

Application filed January 10, 1891. Serial No. 377,340. (No model.)

To all whom it may concern:

Be it known that I, LA MOTTE C. ATWOOD, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Electric Car-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 This invention relates to certain improvements in electric brakes for railway-cars; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

15 Figure I is a side elevation illustrative of my invention. Fig. II is a top or plan view.

Referring to the drawings, 1 represents two of the wheels of a car-truck, and 2 part of one of the track-rails.

20 3 represents the brake-shoes, through which friction is applied to the wheels 1, and 4 represents the track-brake, through which friction is applied to the rail 2. The shoes 3 are connected by links 5 to an arm 6, rigidly secured to a rock-shaft 7, which is suitably journaled to the bottom of the car.

25 8 represents a lever secured to the rock-shaft 7 at its lower end and connected by a spring 9 and chain 10 to a winding-shaft 11, which is journaled to the bottom of the car. On the shaft 11 is a gear-wheel 12, meshing into a pinion 13 on the shaft of an electric motor 14.

30 15 represents the wire leading through a switch 16 to the motor, and 17 represents the wire leading from the motor.

35 The track-brake 4 is secured by a crank 18 to a shaft 19, to which is also secured the lower end of a lever 20, the upper end of which is connected independently of the brake-shoe connection by a chain 21 to the shaft 11.

22 represents the side rail of the car-truck.

40 The operation is as follows: When the current is applied, the armature of the motor turns in the direction of the arrow, Fig. I, which revolves the shaft 11 through the described connection and winds the chains 10 and 21 upon the shaft, applying the brake-shoes 3 to the wheels 1, but not applying the track-brake, for the reason that the chain 21 has sufficient slack in it to permit the brake-shoes to be applied to the wheels without the

track-brake being applied to the rail. If it is desired, then, to apply the track-brake, an additional amount of current is turned into the motor, and an additional amount of the chains 10 and 21 are wound upon the shaft 11. As this is done the spring 9 is elongated or opened out and the track-brake, through the chain 21, the lever 20, and the crank 18, is forced down upon the rail. In this manner I form a very cheap and effective combined wheel and track-brake, which, with the simple manipulation of the current, applies the brake-shoes to the wheels alone, or in addition thereto applies the track-brake.

I claim as my invention—

1. In an electric car-brake, the combination of brake-shoes, a track-brake, an electric motor, a connection between the brake-shoes and the motor, and an independent connection between the track-brake and the motor, whereby the brake-shoes alone can be applied or the brake-shoes and the track-brake both applied at will.

2. In an electric car-brake, the combination of an electric motor, a shaft, gearing between the motor and shaft, brake-shoes, a connection between the shoes and said shaft, a track-brake, and a connection between the track-brake and said shaft, substantially as and for the purpose set forth.

3. In an electric car-brake, the combination of an electric motor, a shaft, gearing between the shaft and motor, brake-shoes, a rock-shaft having link connection with the brake-shoes, a lever on the rock-shaft, a chain and spring connecting said lever to the shaft geared to said motor, a track-brake, a shaft to which the track-brake is connected, a lever on said last-mentioned shaft, and a chain connecting said lever to the shaft geared to the motor, substantially as shown and described.

4. In an electric car-brake, the combination, with the wheel-brake, the track-brake, and the motor, of a connection between one of said brakes and the motor and a relatively shorter but yielding connection between the other brake and the motor, substantially as and for the purpose set forth.

LA MOTTE C. ATWOOD.

In presence of—

E. S. KNIGHT,
THOS. KNIGHT.