(No Model.)

J. P. SPARKS.

STREET CAR MOTOR.

No. 362,795. Patented May 10, 1887.

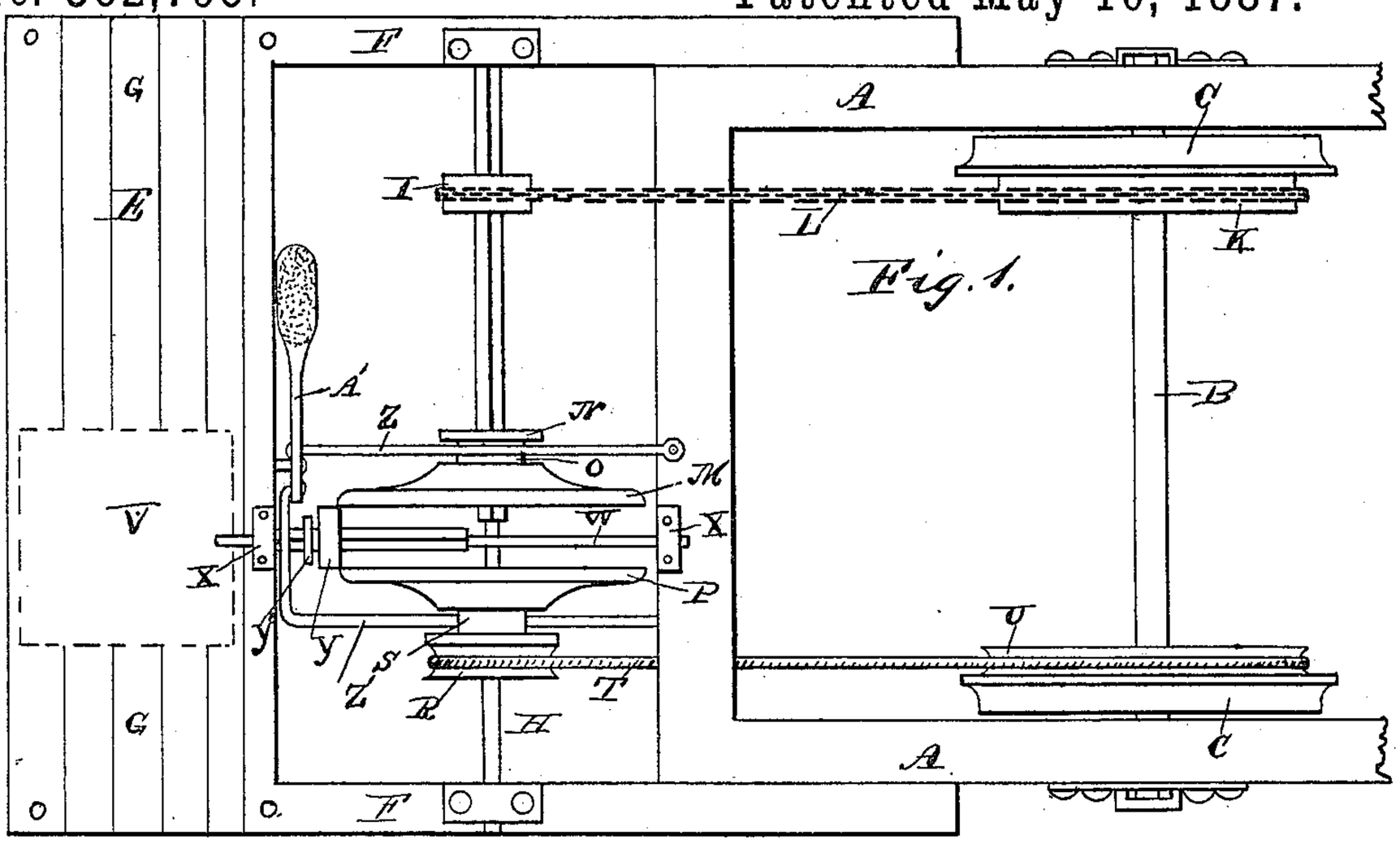


Fig. 1.

Fig. 2.

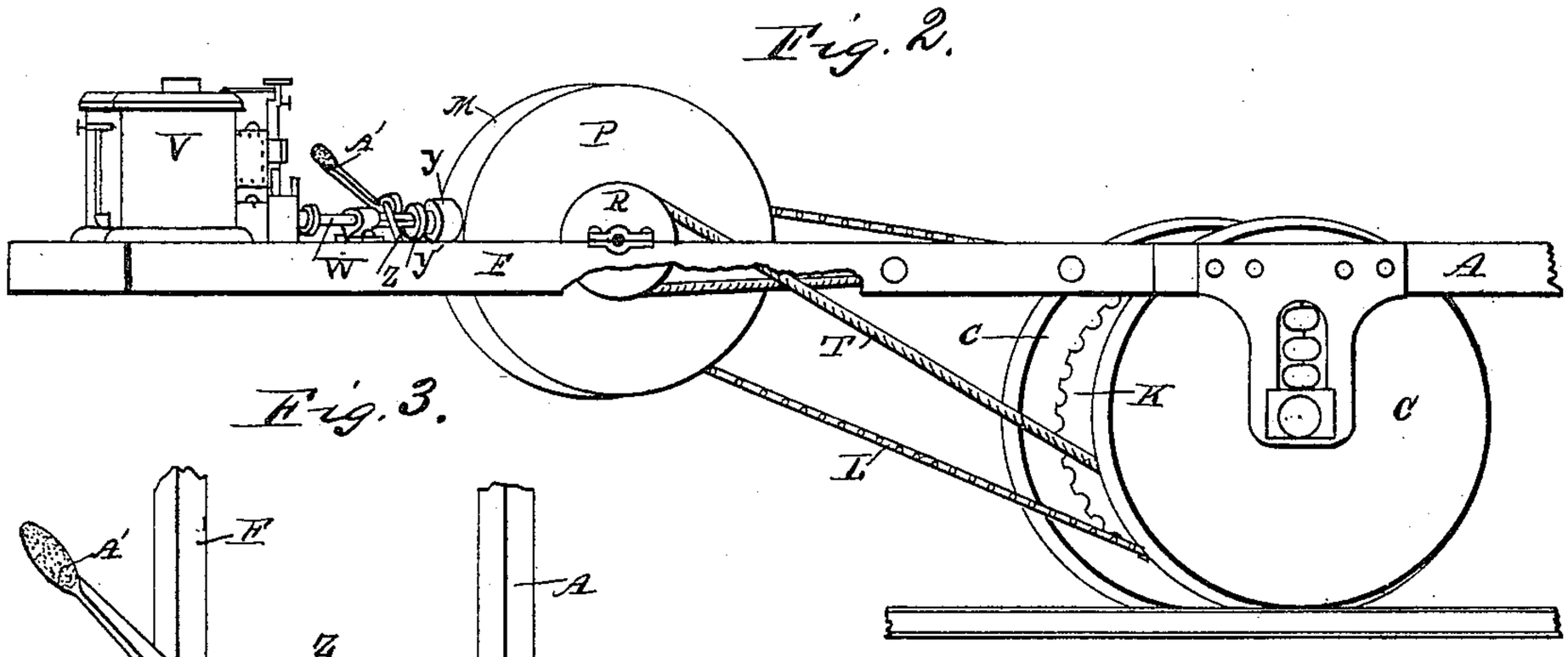
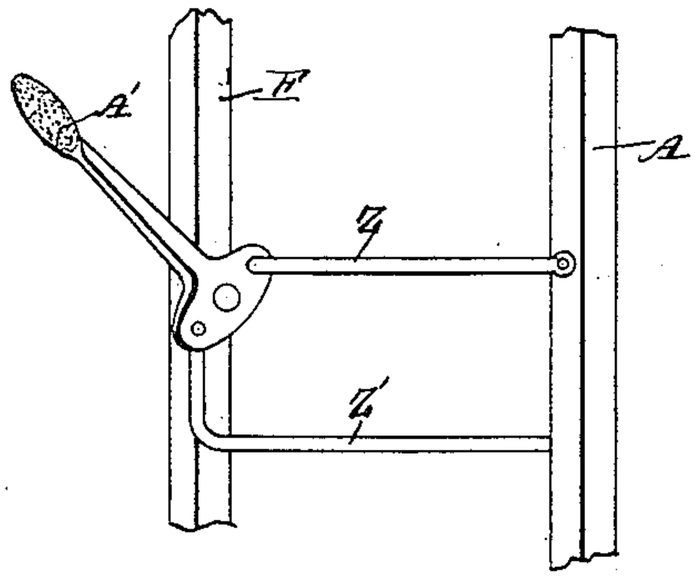


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN PARKS SPARKS, OF AUSTIN, TEXAS.

STREET-CAR MOTOR.

SPECIFICATION forming part of Letters Patent No. 362,795, dated May 10, 1887.

Application filed July 13, 1886. Serial No. 207,948. (No model.)

To all whom it may concern:

Be it known that I, JOHN PARKS SPARKS, a citizen of the United States, residing at Austin, in the county of Travis, State of Texas, have invented a new and useful Street-Car Motor, of which the following is a specification.

My invention relates to an improvement in street-car motors; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of the platform of a street-car provided with my improvements. Fig. 2 is a vertical perspective view of the same. Fig. 3 is a detail view.

A represents the platform of the car.

B represents one of the axles, and C represents the wheels secured to the axle. To one end of the car-platform is attached a projecting platform, E, comprising the beams F and the flooring G, and forms the supporting-frame for the motor.

H represents a transverse shaft, which is arranged parallel with the axle B and is journaled in bearing-blocks which are secured to the beams F. Rigidly secured near one end of the said shaft H is a sprocket-pinion, I, which is connected to a sprocket-wheel, K, that is rigid on the axle, by an endless sprocket-chain, L.

M represents a friction-wheel, which is secured to the shaft H, and is free to slide back and forth thereon, and the said friction-wheel has on one side an annular collar, N, in which is made an annular groove, O.

P represents a friction-wheel, which is arranged also on the shaft H, and is adapted to rotate independently of the said shaft, and also to slide back and forth thereon. This wheel P has a sheave, R, rigid therewith, and between the said sheave and friction-wheel is a collar or annular groove, S. An endless wire belt, T, connects the sheave with a grooved pulley, U, that is attached to the axle, the said belt being crossed, as shown in Fig. 2.

V represents the engine, which is secured to the platform in front of the car, and has a rotating shaft, W, which is arranged at right angles to the shaft H, and is journaled in suitable bearing-blocks, X, the said shaft W passing between the opposing faces of the friction-wheels M and P.

Y represents a friction-pinion, which is secured on the shaft W and rotates therewith, but is free to slide back and forth thereon. The said friction-pinion has on one side an annular collar, Y′, in which is made an annular groove, whereby the power end of a suitable lever (which is not here shown) may be attached to the pinion to slide it on the shaft W either toward the center of the friction-wheels or toward the outer edges thereof.

Z represents a bar which has its rear end pivoted to the front of the platform A and bears in the annular groove of the friction-wheel M. Z′ represents a similar bar, which has its rear end pivoted to the front of the platform A and bears in the annular groove of the friction-wheel P. The front ends of the said rods Z and Z′ are connected to a lever, A′, on opposite sides of the fulcrum thereof.

From the foregoing it will be observed that when the lever A′ is turned in one direction the friction-wheels will be moved toward each other and caused to bear against opposite sides of the friction-pinion, and when the said lever is turned in the opposite direction the friction-wheels will be moved from each other, so as to release the friction-pinion, and thus disconnect the motor from the axle of the car, so as to bring the latter to a stand-still.

The shaft W rotates at a uniform rate of speed. When it is desired to increase the speed of the car, the friction-pinion is moved rearwardly toward the center of the friction-wheels, and when in ascending grades and rounding curves it is necessary to decrease the speed of the car in order to increase the power of the engine, the pinion is moved forwardly toward the outer edges of the friction-wheels.

Having thus described my invention, I claim—

1. The combination, in a car-motor, of the axle having the wheels K and U, the shaft H, having the wheel I, the endless chain or belt connecting the wheels I and K, the friction-wheels M and P, and the sheave R on the shaft

H, the crossed belt connecting the sheave R and the wheel U, the rotating shaft W, at right angles to shaft H, and arranged between the friction-wheels and the sliding friction-pinion on the said shaft W, to bear against the opposing sides of the friction-wheels, for the purpose set forth, substantially as described.

2. The combination, in a car-motor, of the shaft H, geared to an axle of the car, the friction-wheels on the said shaft, and free to slide thereon, the lever to move the said wheels toward or from each other, and the rotating engine-shaft W, having the friction-pinion to bear against the opposing sides of the friction-wheels, substantially as described.

3. The combination, in a car-motor, of the shaft H, geared to an axle of the car, the friction-wheels free to slide on the said shaft and having the annular collars, the rods Z and Z′, connected to the said annular collars, and the lever A′, connected to the said rods to move the friction-wheels toward or from each other, for the purpose set forth, substantially as described.

JOHN PARKS SPARKS.

Witnesses:
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