(No Model.)

J. B. HUNTER.

MOTOR.

No. 286,702. Patented Oct. 16, 1883.

Fig. 1.

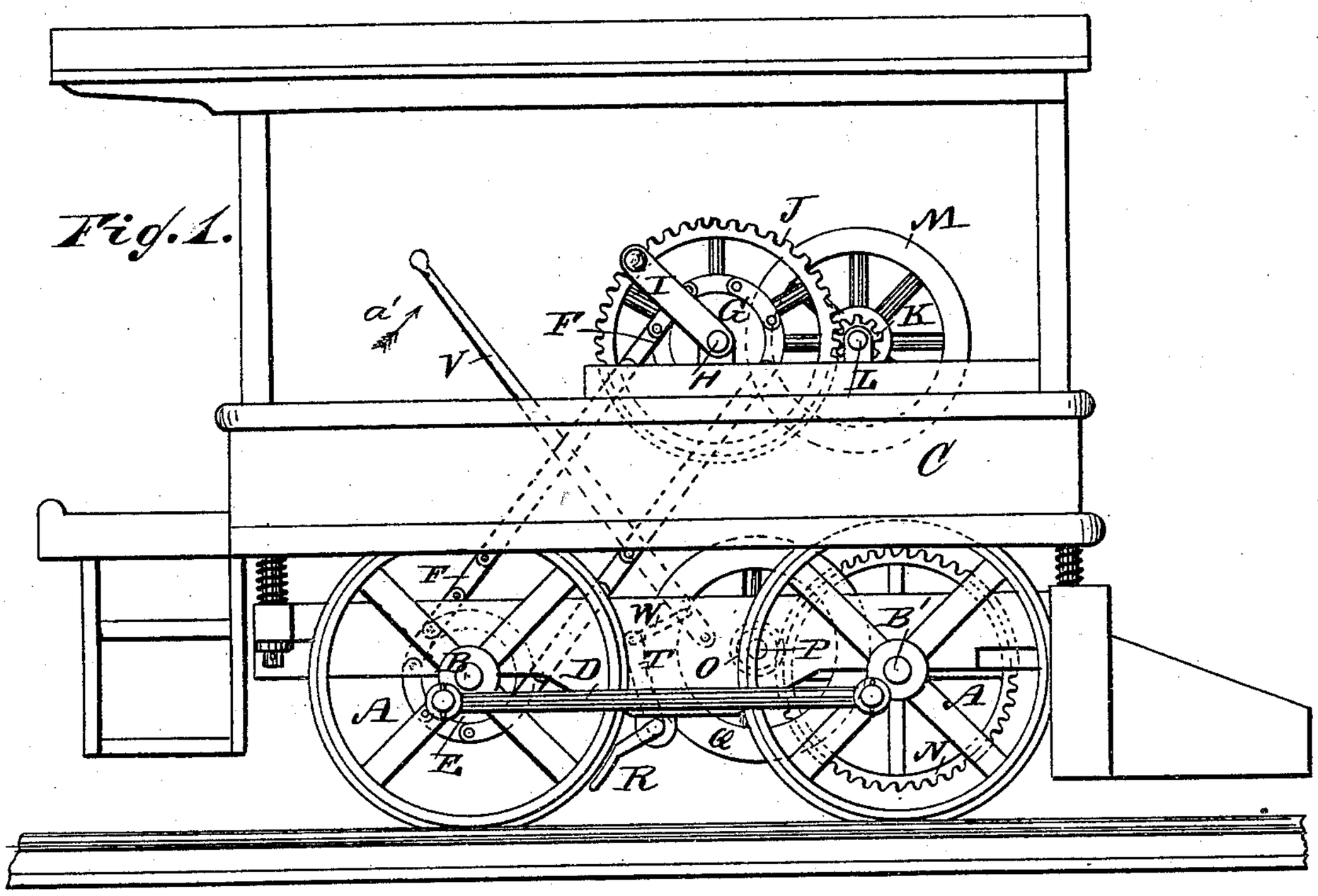
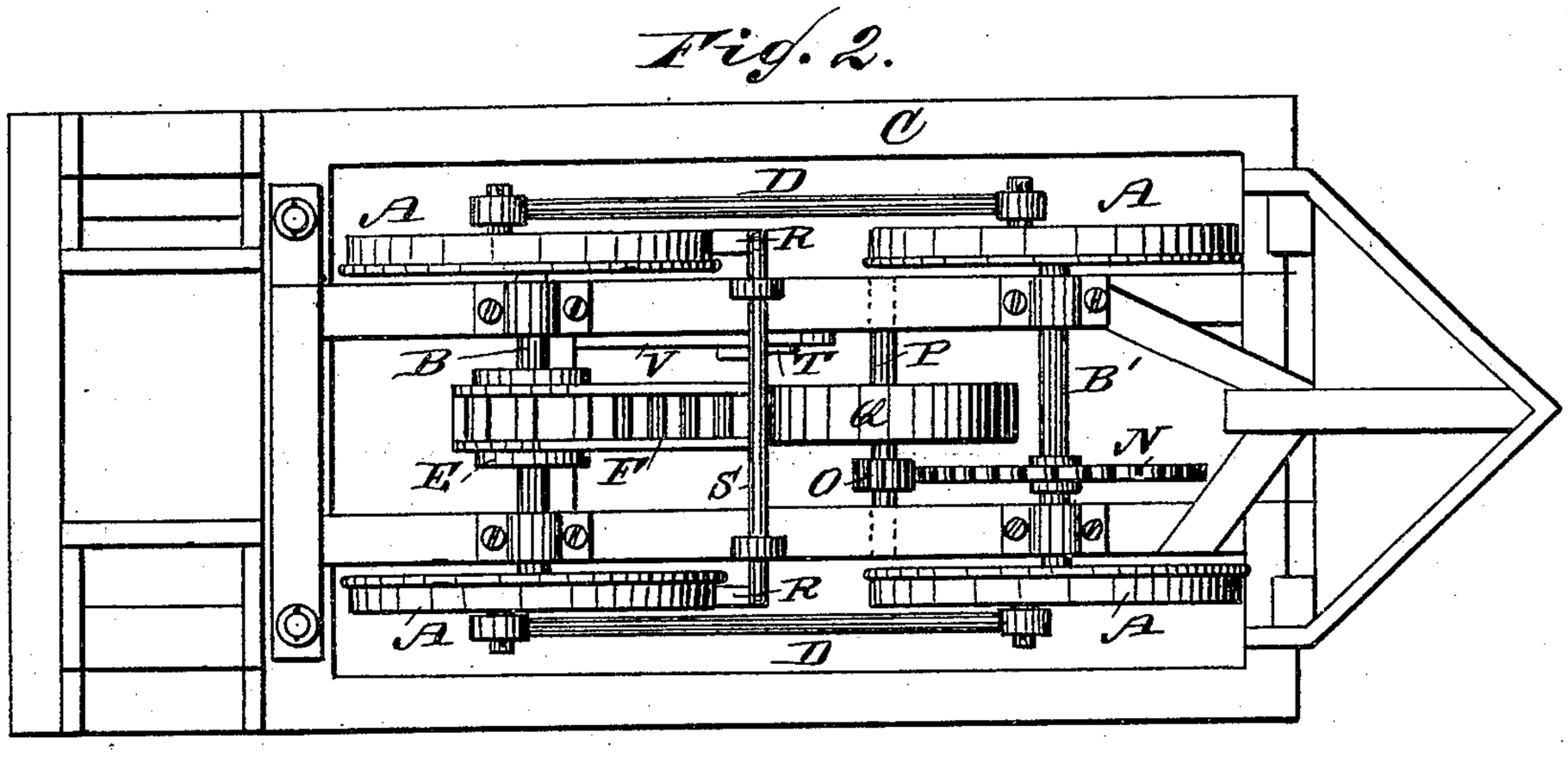


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES B. HUNTER, OF ASHLEY, ILLINOIS.

MOTOR.

SPECIFICATION forming part of Letters Patent No. 286,702, dated October 16, 1883.

Application filed March 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. HUNTER, of Ashley, in the county of Washington and State of Illinois, have invented a new and Improved Motor, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved motor for tramway-cars, light machinery, &c.

The invention consists in a motor constructed with sprocket-wheels, cog-wheels, a driving-chain, and two independent fly-wheels, of which one is rotated directly from the shaft to which power is applied, and the other is rotated from one of the axles on which the wheels are mounted, whereby the power will be equalized and balanced in the motor.

The invention also consists in various combinations of parts, as will be fully described and set forth hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal elevation of my improved motor, showing the same in a car. Fig. 2 is an inverted plan view of the bottom of the same.

The wheels A are mounted rigidly on axles B B′, suitably journaled in a car, C, and the wheels on the same side of the car are coupled by means of coupling-rods D. On the rear axle, B, a sprocket-wheel, E, is mounted, over which a driving-chain, F, of some suitable construction, passes, which also passes over a sprocket-wheel, G, mounted on a shaft, H, provided with a crank-handle, I, on one or both ends. On the shaft H a cog-wheel, J, is mounted, which engages with a pinion, K, mounted on a shaft, L, on which is also mounted a heavy fly-wheel, M. On the front axle, B′, a cog-wheel, N, is mounted, which engages with a pinion, O, on a shaft, P, on which a heavy fly-wheel, Q, is mounted, which is below the floor of the car. Brake-shoes R are secured to the ends of a shaft, S, journaled or held to turn on its longitudinal axis to the bottom of the car, which shaft S is provided with an upwardly-projecting arm, T, which is connected by means of a pivoted link, W, with an upwardly-projecting brake-lever, V, pivoted to the car. By turning the crank or cranks I the wheels A will be revolved and the car will be propelled. The two fly-wheels M and Q will be rotated very rapidly, and will equalize and increase the power and prevent a waste of power. They cause an easy and regular movement of the machine, and prevent sudden and irregular movements of all kinds. The two fly-wheels are entirely independent of each other, and that causes them to be especially effective, for one equalizes the power at the shaft that is turned by means at the cranks, and the other equalizes the power applied to one pair of wheels by the connecting-rods—that is, the power is equally balanced in all parts of the mechanism. By moving the brake-lever V in the direction of the arrow *a′* the brake-shoes R will be pressed against the wheels A, and the speed of the machine will be checked. The motor can be placed on a suitable base, instead of in a car, and can then be used to drive small machinery.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a motor, the combination, with sprocket-wheels, driving-chains, and cog-wheels, of two independent fly-wheels, substantially as herein shown and described, and for the purpose set forth.

2. In a motor, the combination, with the wheels A, coupled by coupling-rods B, of the shaft H, the sprocket-wheels G E, the chain F, the fly-wheel M, driven from the shaft H, and the fly-wheel Q, driven from one of the axles on which the wheels A are mounted, substantially as herein shown and described, and for the purpose set forth.

3. In a motor, the combination, with the wheels A, mounted on the axles B B′, of the sprocket-wheel E, the crank-shaft H, the sprocket-wheel G thereon, the driving-chain F, the cog-wheel J on the shaft H, the shaft L, the pinion K mounted thereon and engaging with the cog-wheel J, the fly-wheel M on the shaft L, the cog-wheel N on the axle B′, the pinion O, engaging with the cog-wheel N, and mounted on the shaft P, and the fly-wheel Q on the shaft P, substantially as herein shown and described, and for the purpose set forth.

JAMES BARNHART HUNTER.

Witnesses:

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