A. K. HADLEY.
Car-Brake.

No. 199,434. Patented Jan. 22, 1878.

Fig. I

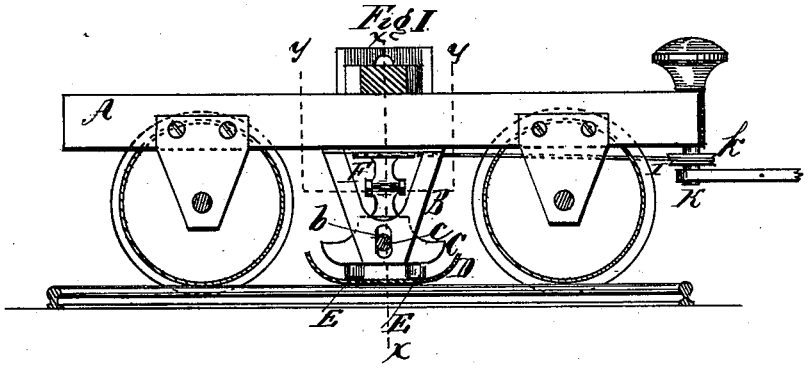


Fig. III

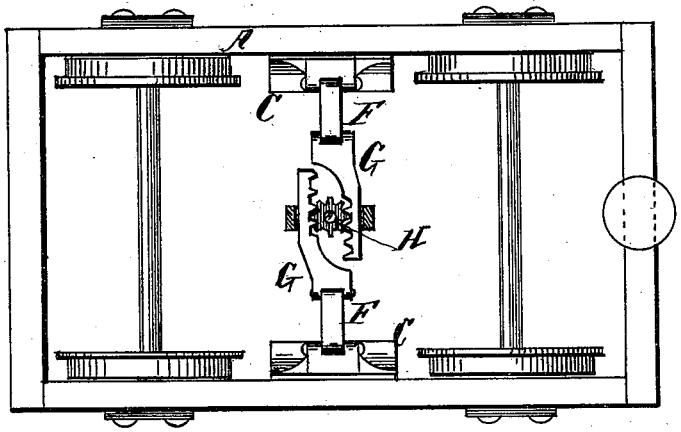


Fig. II

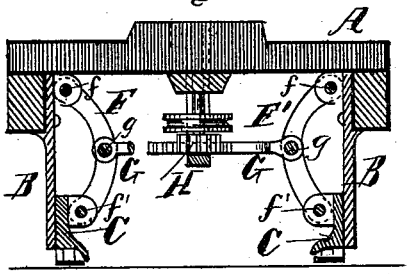
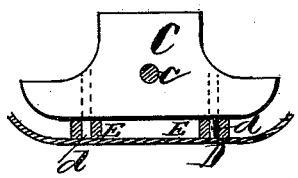


Fig. IV



Witnesses:
J. Barrett.
Richard Gerner

Inventor:
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UNITED STATES PATENT OFFICE.

AMOS K. HADLEY, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND WM. F. C. McCARTY, OF SAME PLACE.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **199,434**, dated January 22, 1878; application filed December 15, 1877.

To all whom it may concern:

Be it known that I, AMOS K. HADLEY, of the city, county, and State of New York, have invented a new and useful Improvement in Car-Brakes, of which the following is a specification:

The object of this invention is to provide a sliding brake, to be moved vertically down upon the top of the track by suitable mechanism, the bottom of the brake being provided with a metallic shoe, between which and the brake-plate proper is interposed a spring-cushion, that will receive the shocks due to the inequalities of the surface of the rail, against which the brake presses.

The brake may be operated by various forms of mechanism, but the one herein described is probably the best; and consists of a pair of toggle-joint arms, operated by a cogged knuckle-bar, actuated by a cogged pinion, which, in turn, may be moved by an ordinary brake-wheel and shaft, or by any other suitable means—as, for instance, by steam or pneumatic power.

The invention will be readily understood by reference to the accompanying drawings, of which—

Figure 1 is a side view of a car-truck frame with my improved brake attached thereto. Fig. 2 is a sectional view taken on the line *x x* of Fig. 1. Fig. 3 is a plan, partly in section, taken on line *y y* of Fig. 1. Fig. 4 is a sectional elevation of one of the brake-plates with its shoe and the interposed spring.

To each side of the truck-frame A is fixed a vertical stand or brake-rest, B, the lower part of which has a vertical slot or groove, *b*, in which the vertical movement of the brake is guided.

The brake-plate C has a lug or projection, *c*, on its outside, which easily fits into the said slot or groove *b*, and moves up and down in it, the outside of the brake-plate resting against the inside of the rest B, and being guided and supported by it. To the bottom side of the brake-plate C is attached a metallic shoe, D, in such a manner as to permit the said shoe a slight vertical movement on its attaching-studs *d*; or the studs may be more properly moved in the brake-plate.

One or more springs, E, either of rubber or metal, will be interposed between the shoe D and the brake-plate C, so as to cause the shoe to yield readily to the inequalities or asperities of the track.

The brake-plate C may be best operated by means of a pair of toggle-joint bars, F F′, one of which is pivoted to the rest B, near its top end, and the other to the plate C, respectively, by the pins *f* and *f′*.

A horizontal knuckle-rod, G, will be attached to the knuckle of the rods or bars F and F′ by means of the pin *g*, so as to be capable of moving the said toggle-joint bars in either direction, as may be desired.

The inner ends of the bars or rods G will be cogged, and arranged to gear into a cogged pinion, H, the turning of which will cause the toggle-joint bars to press the brakes down upon the track, or release them therefrom, as may be desired.

The cogged wheel H may be actuated by means of a driving chain or band, I, which can be operated by a wheel, *k*, on the lower end of an ordinary brake-shaft, K; or the said pinion H may be operated by means of any other appliance for operating brakes—such, for instance, as steam or pneumatic machinery.

Having thus described my invention, I desire to claim—

The yielding-faced brake C D E, the toggle-joint bars F F′, the knuckle-bars G, and the actuating cogged wheel H, combined and arranged substantially as described, and for the purpose set forth.

This specification signed this 10th day of December, 1877.

A. K. HADLEY

Witnesses:
CH. RIEGELMAN,
F. BARRITT.