

E. P. HARRINGTON.
Car-Brakes.

No. 144,537.

Patented Nov. 11, 1873.

Fig. 1.

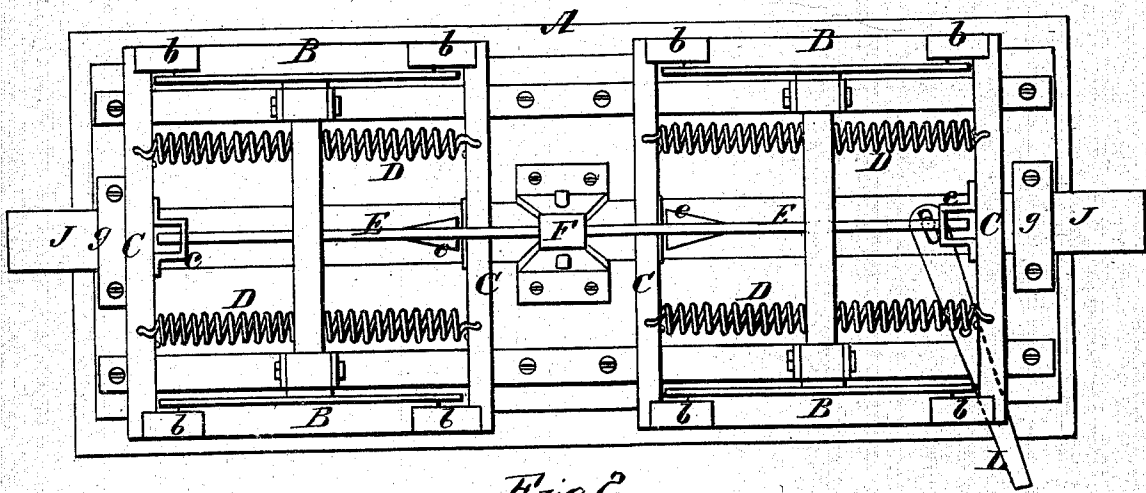
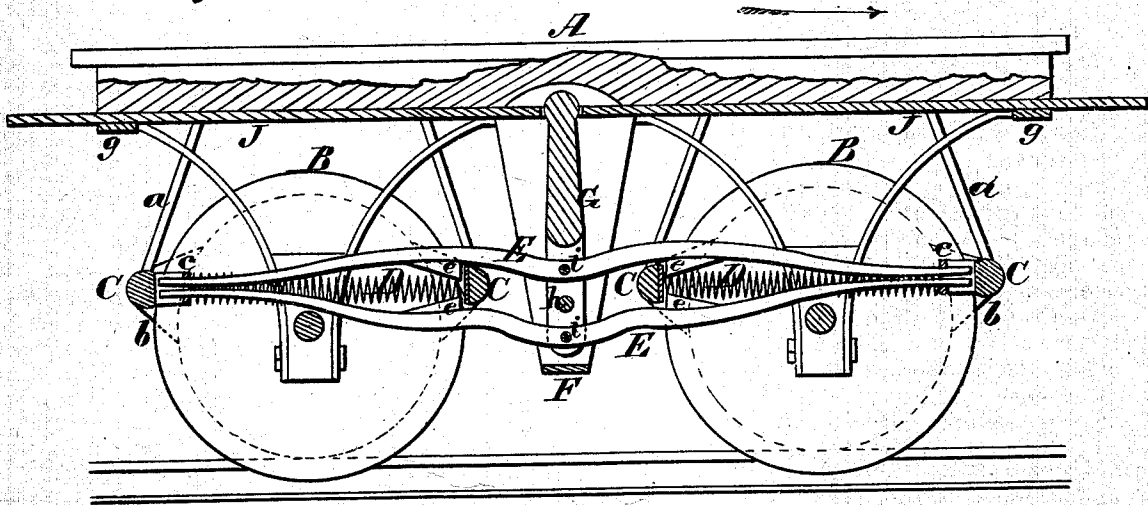


Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

ELIOT P. HARRINGTON, OF VOLUSIA, NEW YORK.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. 144,537, dated November 11, 1873; application filed September 27, 1873.

To all whom it may concern:

Be it known that I, ELIOT P. HARRINGTON, of Volusia, in the county of Chautauqua and State of New York, have invented a new and valuable Improvement in Wagon and Car Brakes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of vertical longitudinal sectional view of my wagon and car brake. Fig. 2 is a bottom view of the same.

This invention relates to improvements on railroad-car brakes, wherein all the brakes throughout a train are controlled by the engineer in the act of starting and stopping the engine. My object is to connect together the swinging brake-bars of each pair of wheels or each truck by means of suitable springs, the recoil of which will forcibly press the brake-shoes against the peripheries of the wheels, and to combine therewith a longitudinally-sliding draw-bar, a double-acting lever, and two double-acting releasing-bars, whereby the brakes will be automatically released from the wheels when the train is moved backward or forward, and automatically applied thereto by the said springs in the act of stopping the train, as will be hereinafter explained.

The following description of my invention will enable others skilled in the art to understand it.

In the annexed drawings, A represents the bed of a railroad-car, and B B are the wheels thereof, the axles of which are journaled in boxes, in the usual well-known manner. C C represent horizontal transverse brake-bars, which are suspended from the car-bed by means of longitudinally-vibrating hangers *a a*, and provided with brake-shoes *b b* on their ends, which are adapted to fit snugly against the peripheries of the wheels. D D represent springs of the helical kind, which connect together the brake-bars C C in pairs, and which should be of such strength that by their recoil alone they will draw the brake-shoes against the wheels with the required force. The draw-

ing represents two pairs of wheels provided with the brakes and brake-springs, as above described. E E represent two rods, which are designed for releasing the brakes from their wheels, and which are arranged one above and the other below the two intermediate brake-bars C C, and curved so that their extremities abut against the inner sides of the two outer brake-bars C C, as seen in Fig. 1. The outer ends of these releasing-rods are supported by guides *c c*, which are secured to the brake-rods. These rods E E have shoulders *e e e e* formed on them, which abut against the two intermediate brake-bars C C, and operate in conjunction with the ends of the rods to release the brakes. F represents a hanger, which is secured rigidly to the car-bed, and extends down therefrom between the two intermediate brake-bars. To this hanger F a lever, G, is pivoted, the upper rounded end of which plays loosely in a longitudinally-movable draw-bar, J, which is attached to the car-bed A at the middle of its width by means of guides *g g*. A longitudinal movement given to the draw-bar J will impart a vibratory movement to the lever G. To this lever the releasing-rods E E are connected by pivots *i i*, one above and the other below the fulcrum-pin *h*, so that, if the car is moved in the direction indicated by the arrow in Fig. 1, one of the shoulders *e* and one of the extremities of each releasing-rod E will press against their respective brake-bars C, and force the brake-shoes free from the wheels. If the car be moved in the opposite direction to that indicated by the arrow referred to, the brakes will also be released from their wheels by the action of the rods E E.

It should be understood that the cars in a train are all connected together by means of suitable couplings applied to the projecting ends of the draw-bars, so that when an engineer cuts off steam to stop the train all the brake-springs D D through the entire train will operate on the brakes, and forcibly press the shoes *b* in contact with the peripheries of the wheels. When a train is in motion, either forward or backward, the brakes are all released from their wheels.

It will be seen that the springs D D not only apply the brakes, but that they also operate as buffers to prevent shocks and concussions

while a train is in motion, and also while making up a train.

If it should be desired for any reason to release the wheels of a car from its brakes, such car not being in a train, this can be readily done by means of a lever, L, (shown in Fig. 2,) which is pivoted to the car-bed, and connected by an oblong slot and a pin to the draw-bar J. The outer end of the lever L may be connected to a winding-up rod by means of a chain, and to such rod a ratchet and pawl may be applied, for holding the brakes free from their wheels. Such a contrivance may be placed at one or both ends of a car, and operated by a person on the platform.

The improved brake, which I have herein described applied to a railroad-car, is applicable to wagons, in which case the draft-tongue will be attached to the draw-bar, and a locking device applied to it, for allowing the springs to hold the brakes in contact with the wagon-wheels while descending hills.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the releasing-rods E, vibrating lever G, and the swinging brake-bars C carrying brake-shoes *b*, substantially as and for the purpose specified.

2. The longitudinally-movable draw-bar J, in combination with the lever G, releasing-rods E, applied to brakes which are held in contact with the wheels by means of springs, substantially as described.

3. The releasing-rods E E, pivoted to a vibrating lever, G, to release the brakes from the wheels, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

E. P. HARRINGTON.

Witnesses:

CHAS. B. STEELE,
JOS. B. LOOMIS.