(No Model.)

S. S. LEACH.

Car Brake.

No. 236,048. Patented Dec. 28, 1880.

Fig. 1.

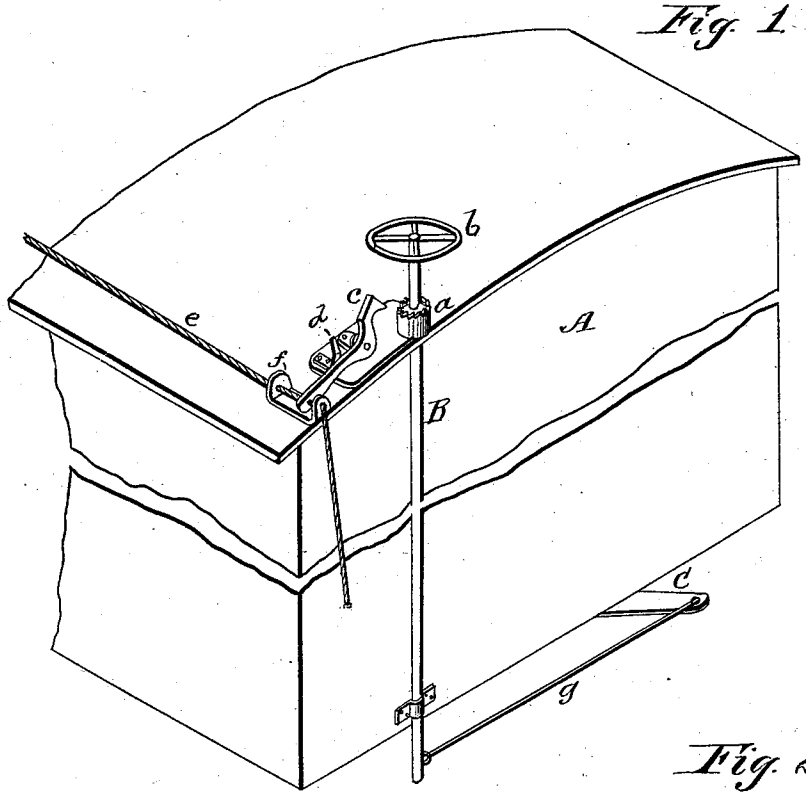
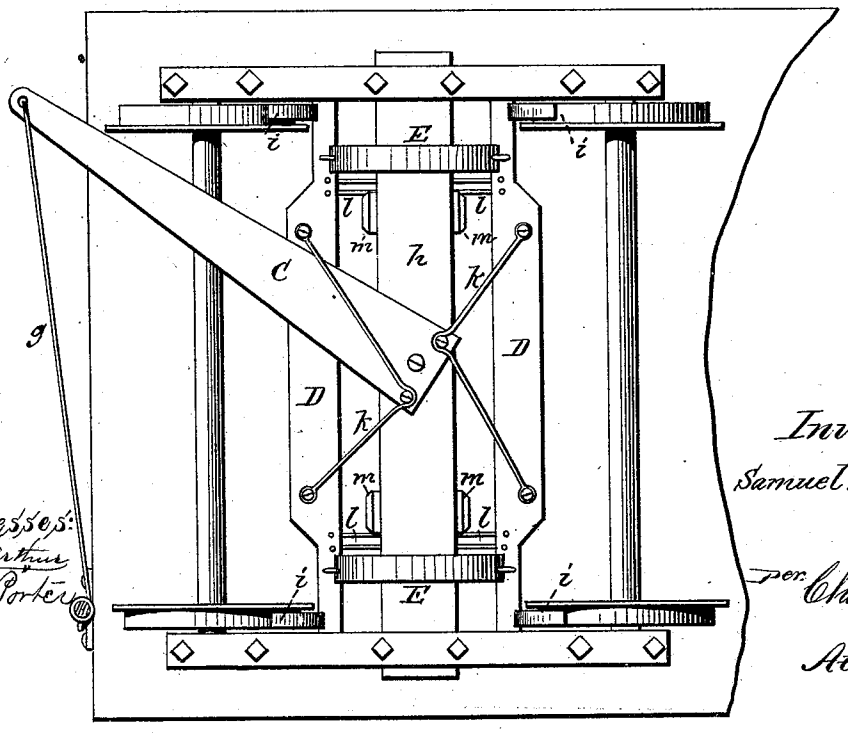


Fig. 2.



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UNITED STATES PATENT OFFICE.

SAMUEL S. LEACH, OF OWEGO, NEW YORK.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 236,048, dated December 28, 1880.

Application filed November 20, 1880. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL S. LEACH, a citizen of the United States, residing at Owego, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Car-Brakes; and I do hereby declare that the following is a full, clear, and exact description 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 drawings is a perspective view of the end of a freight or other car, showing my invention applied thereto; and Fig. 2 is an under-plan view of the car-truck, showing the brake-shoe and its connections.

The present invention has relation to certain new and useful improvements in that class of car-brakes operated by a cord or rope passing along the side or over the top of the train of cars, whereby each brake upon its respective car is operated at the same time throughout the train by pulling upon said cord or rope.

The invention consists in the peculiar construction and arrangement of parts composing the brake mechanism, as illustrated in the drawings and hereinafter described.

In the accompanying drawings, A represents the end of a baggage-car, to which is secured, so as to admit of its rotation, a vertical rod, B. This rod has rigidly connected to it a ratchet, *a*, and a hand-wheel, *b*, for rotating the rod.

To the roof of the car is pivoted, in any convenient manner, a dog, *c*, to engage with the teeth upon the ratchet *a*, a spring, *d*, pressing against the side of the dog to insure its engaging with the teeth upon the ratchet when brought in contact therewith. A rope or cord, *e*, passes along the roof of each car and through guides *f*, and also through a hole in the shank of the dog *c*, by which means the dog is disengaged with the ratchet by pulling on said rope or cord.

The lower end of the rod B is connected to a lever, C, by a cord, *g*, said lever being pivoted to a cross-beam, *h*, of the car-truck.

The brake-shoes are connected to the ends of the brake-beams D, which are, in turn, connected to the lever C by rods *k*.

The brake-beams D are supported by links *l*, connected thereto and to the sides of the cross-beam *h*, stops *m* upon the sides of said beam limiting the movement of the brake-beams D. The brake-beams D, near their outer ends, are connected by flat steel bow-springs E, this form of spring possessing great strength and durability, with less liability than the spiral spring of getting out of order.

In setting the brake, the rod B is rotated, which winds the cord *g* around its lower end, bringing the free end of the lever in a direction toward the end of the rod, which, by the connecting-rods *k*, bring the shoes *i* away from contact with the car-wheels, and are held in this position by the dog *c* being made to engage with the teeth upon the ratchet *a*. In this position the brakes are ready to be operated throughout the entire number of cars upon the train, each car of which is provided with the brake mechanism, as illustrated in the drawings.

When it is found necessary to put on the brakes, the cord or rope *e* is pulled, which forces down the shank of the dog *c*, and disconnects it with the teeth upon the ratchet *a*. The flat bow-springs E, which were previously drawn up, are now left free to expand, causing the brake-beams D to be forced outward, and the shoes *i* against the periphery of the car-wheel, holding them there until the brake mechanism is again set or operated.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-brake, the brake-beams D, provided with shoes *i*, connected together by flat bow-springs E, and to the pivoted lever C by rods *k*, and to the beam *h* by links *l*, in combination with means, substantially as described, for setting and operating said lever, for the purpose set forth.

2. The rod B, carrying ratchet *a*, dog *c*, and rope or cord *e*, passing through the shank of said dog, in combination with cord *g*, pivoted lever C, brake-beams D, connected together by springs E, and to the pivoted lever by rods *k*, substantially as and for the purpose specified.

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

SAMUEL S. LEACH.

Witnesses:

GEORGE R. PORTER,

H. A. HALL.