W. S. SHOTWELL.

Car Brake.

No. 69,262. Patented Sept. 24, 1867.

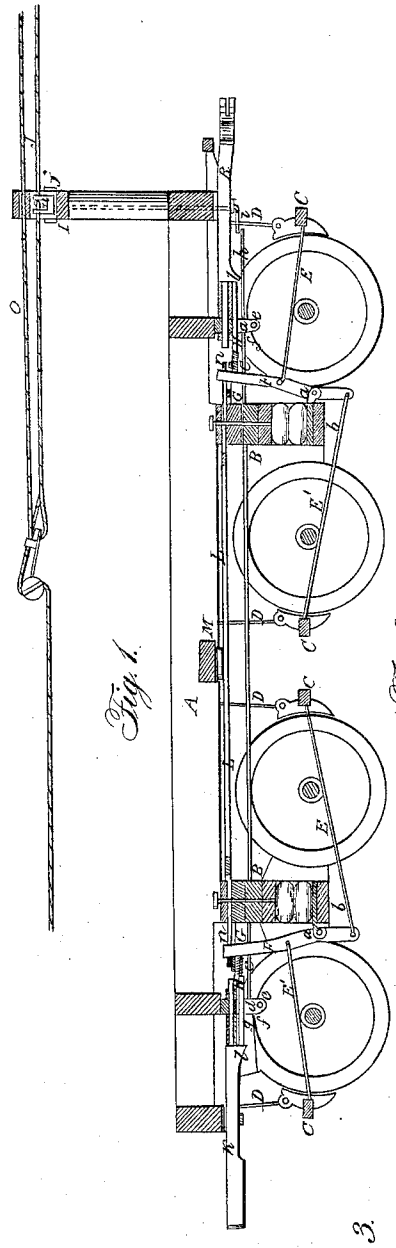

Fig. 1.

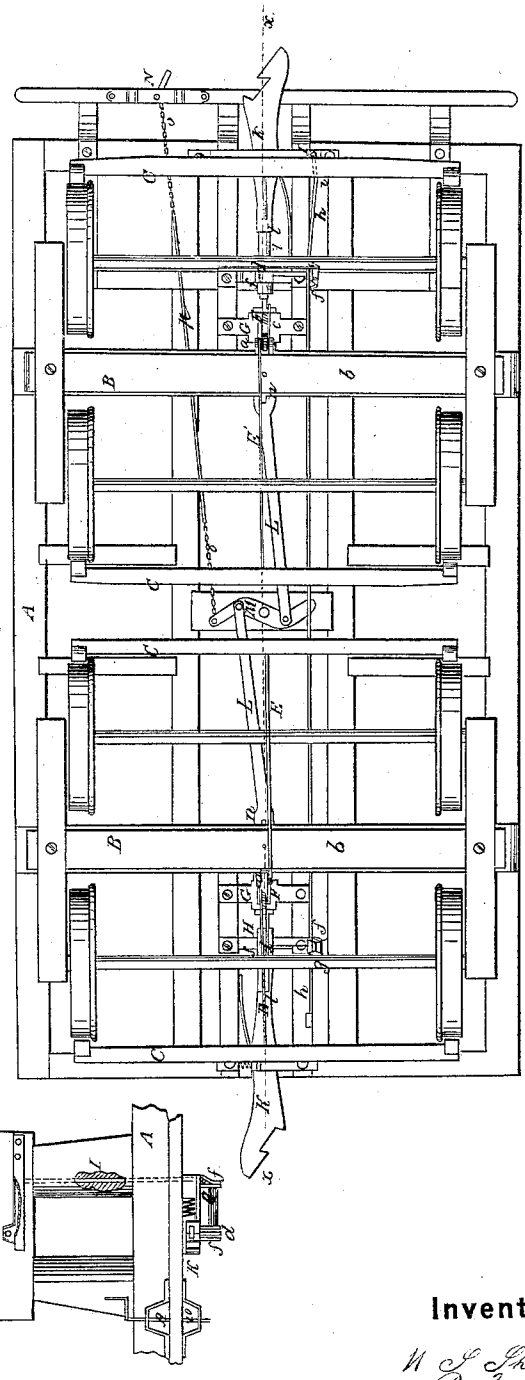

Fig. 2.

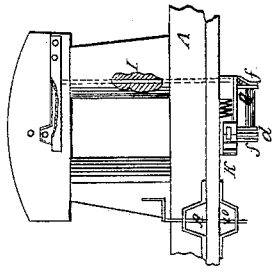

Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

WALTER S. SHOTWELL, OF PATERSON, NEW JERSEY.

IMPROVED CAR-BRAKE.

Specification forming part of Letters Patent No. **69,262**, dated September 24, 1867.

To all whom it may concern:

Be it known that I, WALTER S. SHOTWELL, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Railroad-Car Brake; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved railroad-car brake of that class which are operated or applied by the momentum of the cars after the engineer cuts off the steam.

The object of the invention is to obtain a car-brake of the class specified which will be simple in construction, capable of being adapted or applied to the ordinary hand-brakes now in use, and still admit of the brakes of each car being applied by hand whenever it is necessary to detach a car from a train and switch it off from the main track.

In the accompanying sheet of drawings, Figure 1 is a side sectional view of the running-gear of a car having my invention applied to it; Fig. 2, an inverted plan of the same; Fig. 3, a front view of the same.

Similar letters of reference indicate like parts.

A represents the lower part or bed of a railroad-car, and B B the trucks thereof. These parts, being of usual construction, do not require a special description. C represent brake-bars, suspended by springs or elastic bars D, as usual.

The brake-bars of each truck have rods E E′ attached centrally to them, the inner ends of said rods being connected to levers F, the fulcrum-pins of which pass through eyes *a*, secured to the central cross-bars *b* of the trucks, as shown in Fig. 1. The rods E E′ of the brake-bars are attached to the levers F at opposite sides of their fulcrum-pins, and the upper ends of the levers F pass through loops or guides G, secured to the bed A of the car.

In the upper part of each lever F, below the guides G, there are fitted rods H, in such a manner that the rods may slide in the levers, and on each rod H a spiral spring, *c*, is fitted. (See more particularly Fig. 1.) These rods H rest upon arms *d*, placed on shafts *e*, which have their bearings *f* attached to the bed A; and these shafts *e* also have another arm, *g*, attached, said arms *g* being connected by rods *h* to cranks *i*, at the lower ends of vertical shafts I, at the ends of the bed A.

The upper ends of the shafts I have each an arm, *j*, attached, provided with a socket, and through these sockets elastic cords J pass, said cords having knots *k* in them within the sockets, to prevent the cords from slipping in the latter, and admit of the shafts I being turned in either direction by the pulling of the cords J. This will be fully understood by referring to Fig. 1.

By turning the shafts I the shafts *e* will be also turned, and the arms *d* thereon made to raise the rods H or allow them to drop by their own gravity, said rods when raised being in line with shoulders *l* on the draw-heads K of the car-bed A, as shown in black in Fig. 1. When the rods H are thus raised the brakes will be applied by the momentum of the cars whenever the engineer cuts off the steam, as the draw-heads K, in that case, will be forced inward or in a direction toward the center of the bed A, and the shoulders *l* on the draw-heads will act against the rods H, and the latter, in turn, actuate the levers F, which apply the brakes, as will be fully understood by referring to Fig. 1.

The springs *c* prevent the levers F being subjected to any undue jars or concussions. When the rods H are lowered so that their outer ends will be below the shoulders *l* of the draw-heads, the brakes will be inoperative, so far as momentum as a power is concerned. This lowering of the rods H is necessary in order to admit of a train being backed when necessary.

L L represent two sliding bars fitted to the under side of the car-bed A, and having their inner ends pivoted to a lever, M, at opposite sides of the fulcrum *m* thereof, as shown in Fig. 2, said lever being attached to the under side of the car-bed A. The outer ends of these bars L L are formed with loops *n*, through which the upper ends of the levers F pass. The outer ends of the lever M are connected by chains *o* and rods *p* to windlasses N on the ends of the car-bed. By this arrangement it

will be seen that the brakes of any individual car may be applied by hand at any time when necessary—as, for instance, in switching one or more cars off from a train upon a branch track.

The elastic cords J, I design to have attached to the bell-rope O, which passes through all the cars of a train, so that the engineer, when necessary, may operate simultaneously the rods H of all the cars of the train. The cords J should be attached to the bell-rope O by a snap or fastening, P, so constructed as to admit of the ready attachment of the cords to the bell-rope.

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

1. The combination and arrangement of the rods E E′, levers F, spring-rods H, arms *d* and *g*, rods *h*, cranks *i*, shaft I, arm *j*, and cords J, substantially as described, for the purpose specified.

2. The rods H, in combination with the cords J, connected with the bell-rope O, the shafts I, shafts *e*, having arms *d* attached, on which the rods H rest, all arranged substantially as shown and described.

3. In combination with the brake herein described, I claim the bars L and lever M, substantially as and for the purpose specified.

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Witnesses:

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