C. C. HOLT.

CAR-BRAKES.

No. 182,315. Patented Sept. 19, 1876.

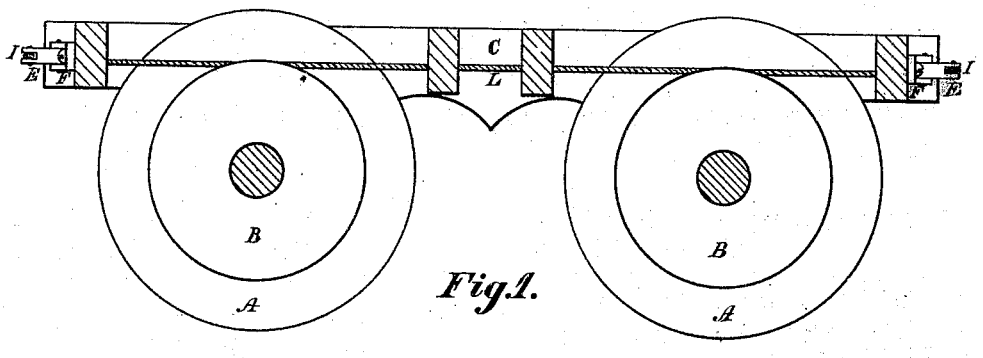

Fig. 1.

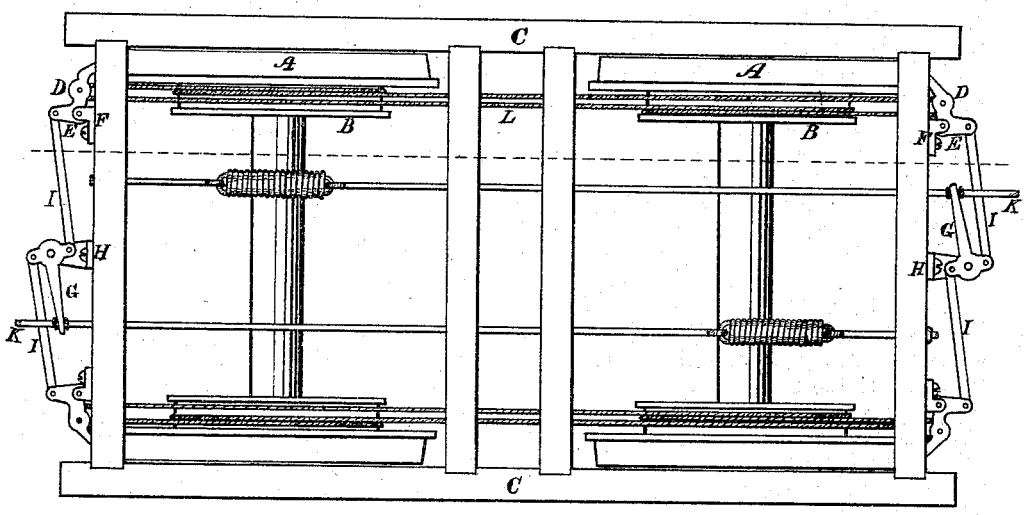

Fig. 2.

Witnesses;

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UNITED STATES PATENT OFFICE.

CHARLES C. HOLT, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **182,315**, dated September 19, 1876; application filed February 24, 1876.

To all whom it may concern:

Be it known that I, CHAS. C. HOLT, of Lawrence, in the county of Essex and Commonwealth of Massachusetts, have invented an Improved Car-Brake, of which the following is a specification:

The object of my invention is to construct a car-brake which shall be simple in its construction and effective for the purpose hereinafter specified.

My invention consists in constructing a car-wheel with a friction-wheel attached thereto, about which is passed a cable or rope, and so attached to a combined lever motion that the cable or rope is tightened about the friction-wheel, (the movement of a wheel by its friction tending to wind the same more closely,) which brings an equal strain to bear in all directions, not binding the arbor in its box, as with brakes applied to one side of a wheel. My brake is so constructed that all hand appliances now in use, or the air or vacuum brake attachment can be applied to the same; but I design to connect the cable working the levers from car to car, and with the engine, where it will be under the direct control of the engineer. This power can be indefinitely multiplied by taking a turn or turns about a leading drum or axle. It is not only my design to apply this principle to horse as well as steam cars, but all road vehicles. the cables L L working in opposite directions and from opposite ends of car.

And I do declare that the following is such a true, exact, and complete description thereof that others skilled in the art to which it appertains can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, for a more complete description thereof, like letters indicating corresponding parts in each of the figures, of which—

Figure 1 is a sectional view of a truck-frame, showing the friction-wheels and the manner in which a cable or rope is applied thereto; and Fig. 2, a top view of a truck-frame, showing the car-wheels, friction-wheels, levers, elbow-cranks, and connecting-rods, and the cable attached thereto, also a cable designed to operate the same.

A A are car-wheels, constructed with friction-wheels; B B, friction-wheels, designed to have a cable passed about the same for the purpose of checking a wheel; C, a truck-frame, designed to contain the trucks and brake appliances; D D D D, pulleys placed in the crank-elbows E E E E, and designed to have the cable L passed about the same; E E E E, elbow-cranks, designed to hold the pulleys D D D D and connecting-rods I I I I, and change the direction of power applied; F F F F, sockets or bearings, designed to hold the elbow-cranks E E E E. G G are T-levers or double elbow-cranks, designed to operate the elbow-cranks E E E E, and connected therewith by the connecting-rods I I I I; H H, bearings, designed to hold the T's G G; I I I I, levers, designed to connect the T's G G with the elbow-cranks E E E E, and impart motion thereto; K K, cables connected with the T's G G, and designed to operate the same; L L, cable passing about the friction-wheels B B and the pulleys D D D D, and designed to serve to brake or check the motion of a car.

To use my said invention, (the apparatus being applied to a car, as herein described,) cause the apparatus (either by windlass, air, or vacuum, or other appliances) to be brought into operation, which tightens the cable K and makes the T's G G, and, by the connecting-rods, operate the elbow-cranks and bind the cable about the wheels B B, and thereby check the car or train.

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

In a car-brake constructed as herein described, the combination of the wheels B B, the cable L, the pulleys D D, the elbow-cranks E E E E, the bearings F F, the rods I I I I, the T's G G, the bearings H H, and cables K K, in a manner and for the purpose substantially as and for the purpose set forth.

CHARLES C. HOLT. [L. S.]

Witnesses:
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