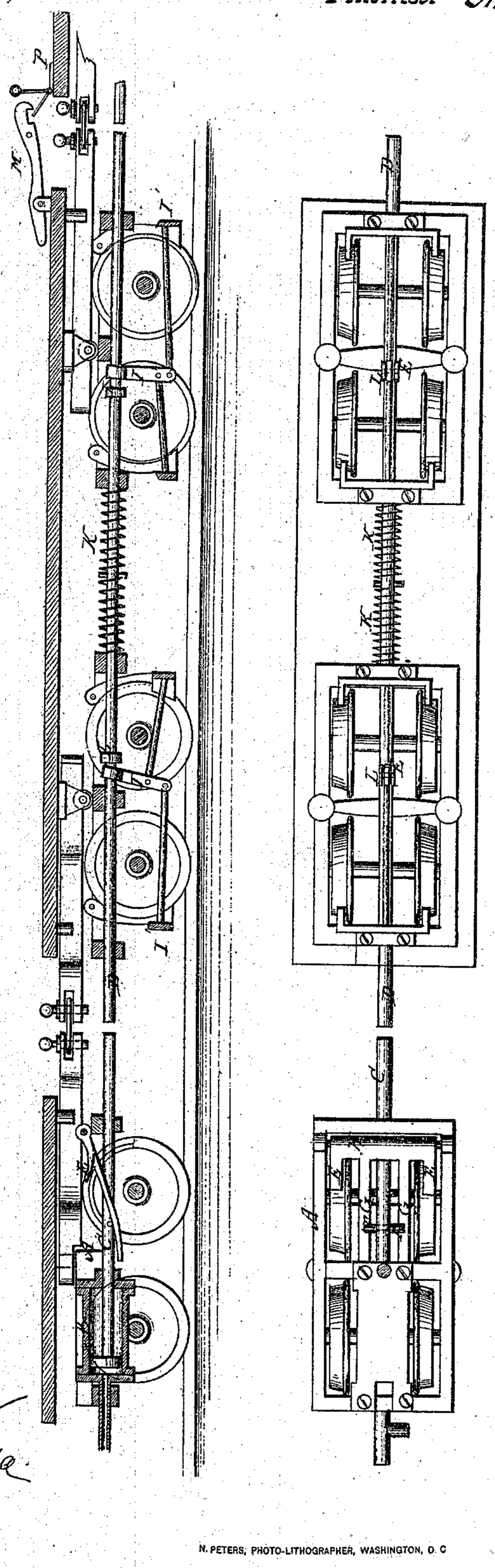
Hill & Tripp.

Steam Car Brake.

No. 112,456. Patented Mar. 7, 1871.



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UNITED STATES PATENT OFFICE.

LUTHER HILL, OF STONEHAM, AND SETH D. TRIPP, OF LYNN, MASS.

IMPROVEMENT IN RAILWAY-CAR BRAKES.

Specification forming part of Letters Patent No. **112,456,** dated March 7, 1871.

To all whom it may concern:

Be it known that we, LUTHER HILL, of Stoneham, in the county of Middlesex, and SETH D. TRIPP, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and Improved Car-Brake; and we 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 drawing, forming part of this specification.

The purpose of our invention is to improve the car-brakes now known to the public by the introduction thereinto of a new combination of certain instrumentalities.

We will first describe our invention in connection with all that is necessary to a full understanding thereof, and then clearly point it out in the claim.

Figure 1 is a longitudinal sectional elevation of a truck, which may be considered the truck of a tender, and a car coupled thereto, having our improved brake-actuating apparatus applied; and Fig. 2 is a plan of the same, the platforms being removed.

Similar letters of reference indicate corresponding parts.

A is the truck of the tender, and B a steam-cylinder attached thereto, said cylinder being provided with a steam-piston and suitable steam-pipe connections with the boiler of the locomotive; also, with suitable escape-passages.

The rod C of the piston extends along through the truck-frame to the rear as far as the draw-head, so that when the truck slackens speed quickly for any cause the said projecting end of the rod C will come in contact with the brake-actuating rod D of the next car and move it back to bring the brakes of that car upon the wheels. At the same time the piston moves back, which is effected by steam let into the cylinder by the engineer whenever it is required to brake up. The brakes E of the tender are also brought into action by the said rod, which, in this case, is provided with two lugs, F, which, sliding along the inclined arms G of the oscillating bar H, to which the brakes E are connected, force the said brakes down.

The rods D of the cars behind the tender are so connected to the brake-levers I that when pushed toward the end of the car which is rearward in the train, they will actuate the brake I of one truck, so that, the car being run either end first, one set of brakes will be brought into action by the backward movement of the rods. In this case the said rods slide through eyes in the ends of the brake-levers, and have collars L to bear against the levers, and one lever is arranged to actuate the brakes when moved to the right and the other when moved to the left.

The brakes I′ are of the ordinary construction and arrangement.

K represents springs arranged on the rods, to restore them when the piston is moved back and release the brakes.

In order to hold the cars so as to continue the brakes in action after the cars have come together, catch-bars M may be arranged on the platforms at the ends, so that they may be connected temporarily when in close contact, and held as long as the brakes are required to be kept on; otherwise they would fall back and the brakes would be released. These catch-bars may be released, when required, by a brakeman, or they may be by cords attached to them or to the trip-levers P and to the signal-bell rope in such a way that the engineer, pulling it toward him, can release them.

Commonly, it will probably not be necessary to connect more than the baggage-car and the one next behind it in this way, so that the baggage-man may attend to releasing the catch, as, on trains provided with this improved brake-actuating apparatus, brakemen will not be employed, the special object of it being to place the management of the brakes in the hands of the engineer as much as possible.

To prevent the rods D under the cars from being bent in passing around curves, the holes through the truck-frames at the inner ends are elongated to allow them sufficient play thereat not to be cramped.

Of course, the cylinder may be placed either on the tender or the locomotive, as may be preferred.

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

The combination, with the rod C, of the studs F, levers G, shaft H, and brakes E, all substantially as specified.

LUTHER HILL.
SETH D. TRIPP.

Witnesses:
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