G. W. COMBS.

Car Brake.

No. 76,715. Patented April 14, 1868.

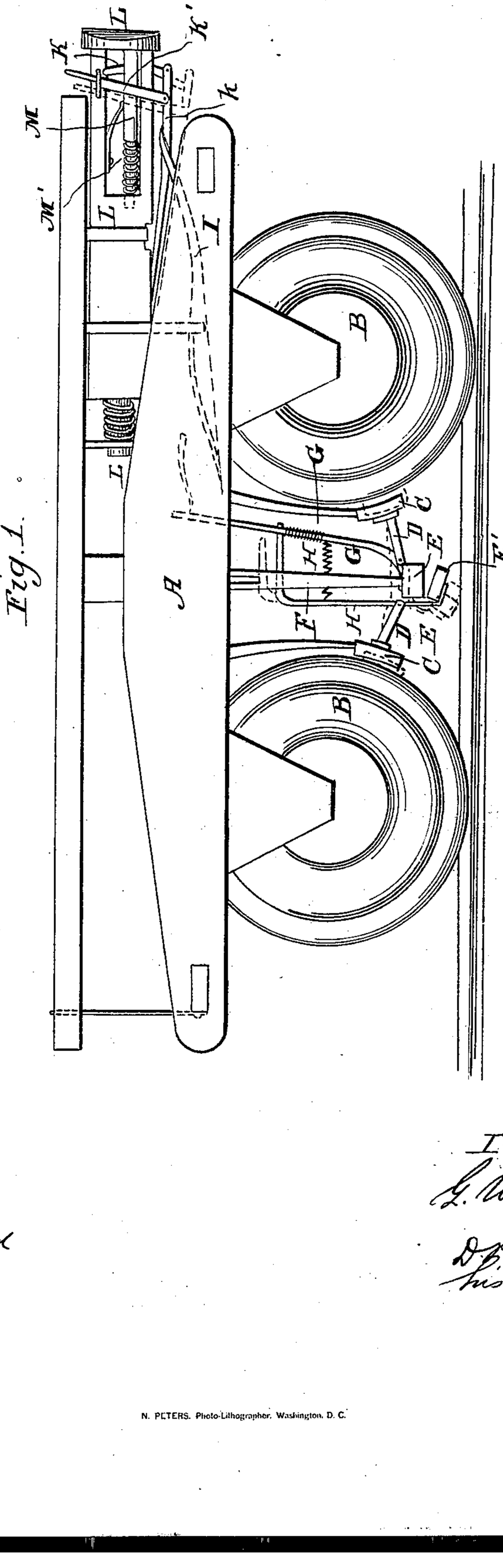

Fig. 1.

Witnesses:
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by
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United States Patent Office.

GEORGE W. COMBS, OF CANANDAIGUA, NEW YORK, ASSIGNOR TO HIMSELF AND J. B. MURRAY & SONS, OF SAME PLACE.

Letters Patent No. 76,715, *dated April* 14, 1868.

IMPROVED CAR-BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE W. COMBS, of Canandaigua, in the county of Ontario, and State of New York, have invented a new and useful Improvement in Car-Brakes and Couplings for Railroad-Cars; 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 part of this specification, in which the construction is shown in a side elevation of a car with my improvements attached.

My improvements consist in, firstly, an automatic coupling, and, secondly, a brake, which, in case of the car running off the track, will be immediately applied to the wheels to check the momentum of the car, and, at the same time, acting upon the coupling, disengage the cars. This brake is not designed for use in the ordinary stopping of the train, but to act automatically in case of accident. It may be, however, so arranged and connected by levers that it may be used as an ordinary brake, and yet act automatically in case of accident.

In the annexed drawings, A is the truck of a car, and B B are the wheels. The rubbers C C are placed between the wheels, being pressed outwardly and against the rims of the wheels by the toggle-joint D D, hinged to the cross-beam E. This beam is suspended from the truck by the slotted hangers F, which permit the cross-beam to be raised to actuate the toggle-jointed brake. This may be accomplished by means of a series of levers, operated by hand, or by means of the weight of the car falling on the beam E, when the wheels are thrown from the track. The cross-beam is so placed that while ordinarily above the track, it will rest against the track whenever the wheels are off the track. The full weight of the car is, in the latter case, exerted upon the toggle-joint to press the rubbers against the rim of the wheels.

The cars are disconnected, when one of them runs off the track, in the following manner: The beam E′ is hinged to the beam E at one corner, as shown in the drawings. The arm G is fastened to the beam E. It is surrounded by the coiled spring G′. The arm H is fastened to the hinged beam E′. It is drawn toward the arm G by the coiled spring H′. The arm H being bent at right angles, as shown, its point is drawn, by the spring H′, through an eye in the arm G, where it holds down the upper end of the spiral spring G′. When, however, the wheels leave the track, the weight of the car falling on the beam E′, it will be forced upward against the beam E, thereby drawing back the arm H, and withdrawing its point from the eye in the arm G, and releasing the spring G′, which will force upward the lever I, through which the arm G passes.

The cars are coupled by means of a pin, K′, attached to a spring, K, which presses the pin upward and keeps the link secured. The end of the lever I is bent, so as to rest on the spring K. The lever being pivoted in the middle, it follows that, when the end attached to the arm G is forced up, by releasing the spring G′, the bent end will force down the spring K and draw the pin K^1 out of the link. The springs G′ and K must be so proportioned that the pressure of the spring G′ will be sufficient to bend the spring K.

The coupling may be operated automatically in the following manner: The arm K^2 is pivoted to the spring K. It is notched at the upper end, as shown, to hold the spring pressed down, and the pin withdrawn from the chamber in the draw-head. This is accomplished by a staple in the draw-bar, against which the shoulder of the notch may rest. When the cars are run together, the concussion forcing the draw-head back, will cause the end of the arm K^2 to strike against the frame of the car, and disengage the notch, and allow the pin K^1 to rise, passing through the link and coupling the cars.

M is a jaw placed within the chamber in the draw-head. It is pressed down by a spring, M′. It is curved upward at the point to form a guide to direct the link into the draw-head, where it is confined by the pin K′ between the jaw M and the bottom of the draw-head.

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

1. In combination with the wheels B, the intermediately-placed brakes C C, connected by a toggle-joint, D D, and beam E, suspended upon the slotted hangers F, and so arranged in relation to the track that when

the cars are thrown from the track, the weight of the car shall be applied to press the brakes against the wheels, substantially as set forth.

2. The combination of the beams E and E′, arms G and H, spring G′, lever I, spring K, and pin K[1], for automatically disconnecting a car when thrown from the track, substantially in the manner set forth.

3. The combination of the draw-bar L, jaw M, spring K, and pin K[1], and arm K[2], arranged to operate substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. COMBS.

Witnesses:

T. HINMAN SMITH,

F. H. WHITWELL.