

L. PARKER.

Car Brake.

No. { 1,779, {  
32,783. }

Patented July 9, 1861.

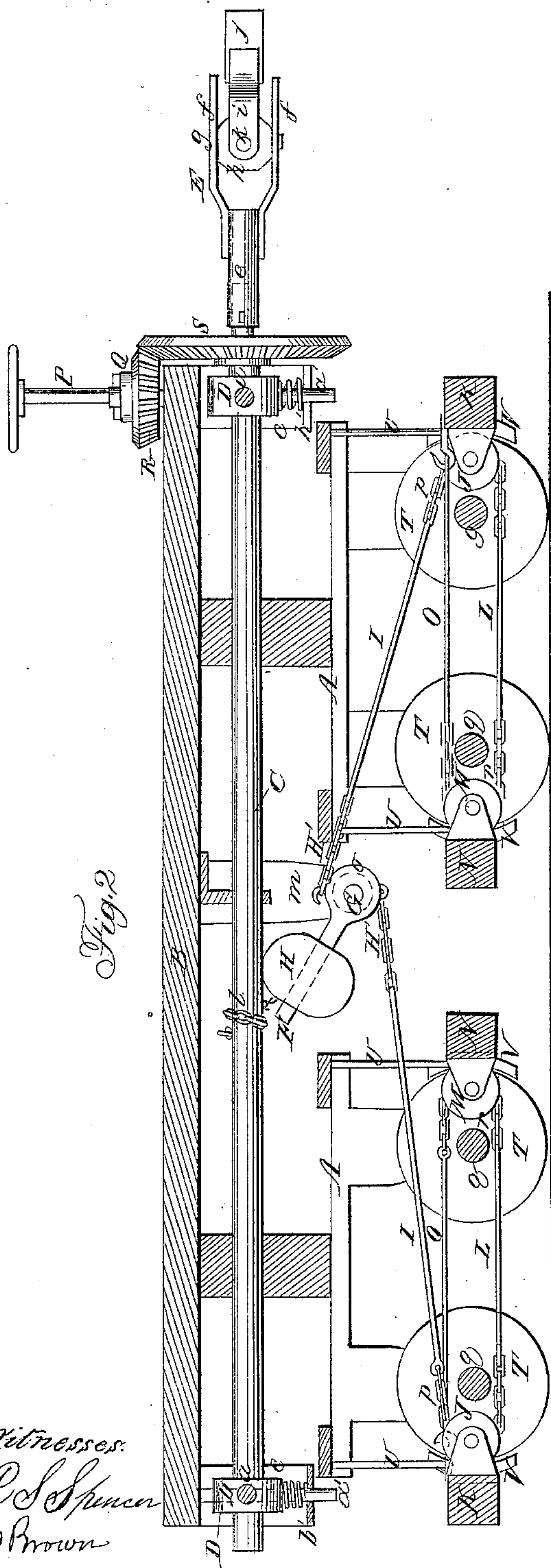


Fig. 2

Witnesses:  
R. S. Spencer  
C. Brown

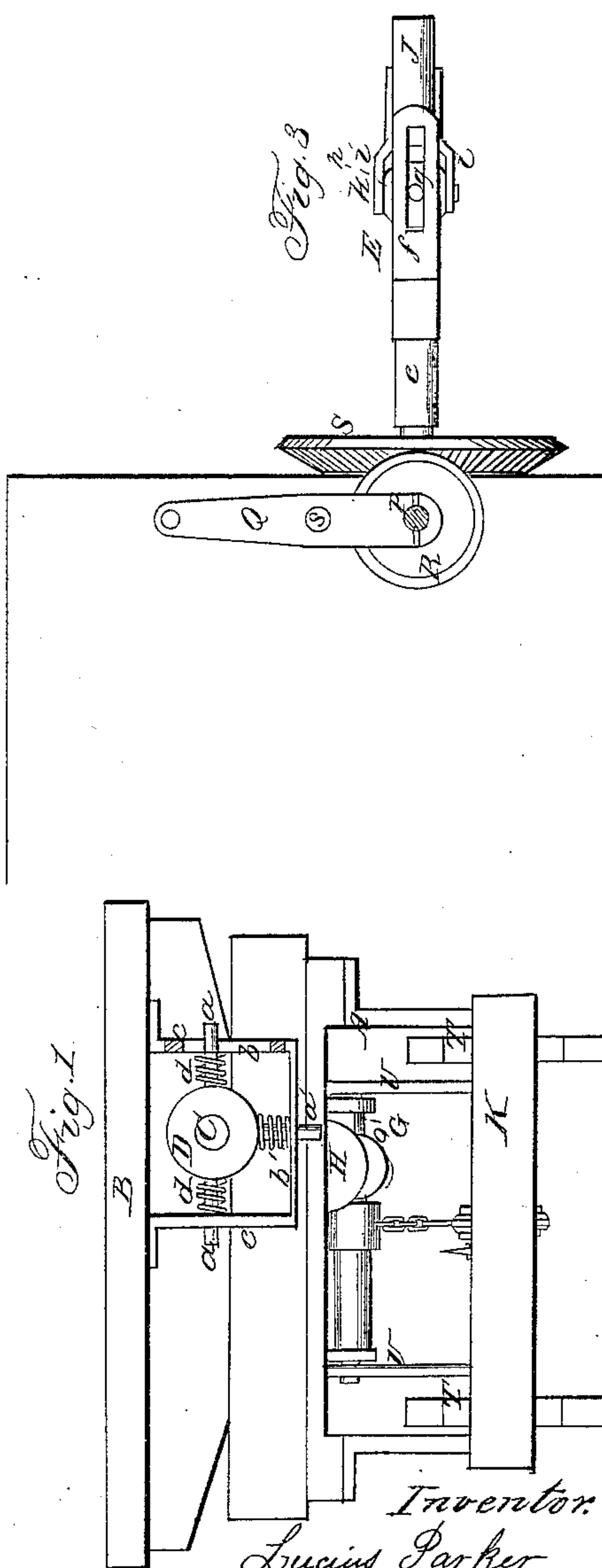


Fig. 1

Inventor:  
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per Munn & Co.  
attys



# UNITED STATES PATENT OFFICE.

LUCIUS PARKER, OF MANCHESTER STATION, CONNECTICUT.

## RAILROAD-CAR BRAKE.

Specification of Letters Patent No. 32,783, dated July 9, 1861.

*To all whom it may concern:*

Be it known that I, LUCIUS PARKER, of Manchester Station, in the county of Hartford and State of Connecticut, have invented a new and Improved Railroad-Car Brake; 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, in which—

Figure 1, is an end view of my invention; Fig. 2, a side sectional view of the same; Fig. 3, a detached plan or top view of the coupling which is employed for connecting the brakes of a series of cars.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a brake for railroad cars which may be operated with great facility and be capable of applying itself in case of the casual detachment of a car, or any number thereof from a train; the invention being also so arranged that all the brakes of a series of cars comprising a train may be operated simultaneously and the train stopped within as short a distance as practicable.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, A, represent two car-trucks which may be constructed in the usual or in any proper way, and B, is the bed of the car which the trucks support.

C, is a shaft which extends longitudinally under the car its whole length and has its ends fitted in bearings D, which are of cylindrical form and have rods *a, a*, projecting radially from them, the rods *a, a*, projecting horizontally from opposite sides of the bearings, and the rods *a'*, projecting vertically from the under sides of the bearings. The rods *a, a*, extend through vertical slots *b*, in the sides of vertical pendent guides *c, c*, attached to the ends of the platform or bed B, of the car, and the rods *a'*, pass through horizontal plates *b'*, which may connect the lower ends of the pendent guides *c, c*, of each bearing, see Fig. 1. The rods *a, a, a'*, have each a spiral spring *d*, on it, and these springs serve to retain the bearings in proper position, but still allow a lateral and vertical movement or play of the same in order to compensate for the irregular movement of the cars while passing along.

The shafts C, of several cars are connected

together by couplings E, which are constructed as follows: On the end of one shaft a tube *e*, is fitted and secured in any proper way. The outer end of this tube is forked or provided with two parallel arms *f, f*, each of which is slotted longitudinally to receive the ends of a pin *g*, which passes through a ball or sphere *h*, which ball or sphere is fitted and secured between parallel arms *i, i*, attached to a tube *j*, which is fitted on the end of the shaft C, of the adjoining car. The ball or sphere *h*, is secured between the arms *i, i*, by a pin *k*, the arms *i, i*, being allowed to work freely on said pin. By this arrangement it will be seen that a universal-joint coupling is obtained for the shaft C, the cars being allowed to vibrate or play in any direction without at all interfering with the proper connection of the shafts C.

To the shaft C, of each car the outer end of a lever F, is attached by a chain *l*. The lever F, is attached at its inner end to a shaft G, the bearings of which are in pendants *m, m*, attached to the car bed B, the shaft G, being allowed to turn freely in its bearings. On the lever F, there is fitted a weight H, which may be adjusted to any desired point on the lever and secured thereto by a set screw or any proper means.

On the shaft G, there is a hub or boss *o*, to which two chains *H', H'*, are attached at opposite points. These chains *H', H'*, are connected to rods I, I, which pass longitudinally through each truck A, A, and have chains *p, p*, attached to their outer ends, said chains passing around stationary pulleys J, J, which are secured to the centers of the outer shoe bar K, of each truck. The chains *p, p*, are attached to rods L, L, which are below the pulleys J, J, and the axles *q*, of the truck wheels, and the inner ends of the rods L, L, have chains *r, r*, attached, which chains extend around pulleys M, M, secured to the centers of the inner shoe bars N, N, of the trucks; the chains *r, r*, are also attached to rods O, O, the outer ends of which are permanently secured to the outer shoe bars K, K.

At one end of each car there is placed a vertical rod P. This rod P, has its lower end secured in a lever Q, which has its fulcrum at *s*. On the lower end of the rod P, beneath the lever Q, there is secured a bevel pinion R, and this wheel gears into a bevel wheel S, on the shaft C.

When the car is moving along the lever F,



and consequently its weight H, is elevated, and the shoe bars N, K, are kept out from the wheels T, by means of elastic pendants U, and the lever F, and weight H, are elevated by turning the shaft C, through the medium of the gearing R, S, and rod P, and in case of a series of cars being connected together the shafts C, are connected by the coupling E, and the wheels R, S, of the foremost car only are in gear as all the shafts C, may be rotated and all the levers F, elevated by turning the shaft P, of the forward car only, the levers F, are prevented from casually falling by any suitable catch or pawl engaging with the bevel pinion R.

Whenever it is designed to apply the brakes the attendant on the forward car actuates the lever Q, and throws the pinion R, out from the wheel S, the levers F, thereby descending under the gravity of the weight H, and the bars N, K, actuated or drawn inward toward the wheels of their respective trucks so that the shoes V, will bear or press against the treads of the wheels, the pressure of the shoes being due to the gravity of the weights H, and the gravity of the weights may be increased or diminished by adjusting them nearer to or farther from the ends of the levers F, as may be desired. In order to relieve the wheels from the shoes, the shafts C, are turned and the chains Z, of the levers F, wound on the shafts C, and the levers F, thereby elevated. In case of the detachment of one or more cars, it will be

seen that their levers F, and weights H, will drop and the brakes applied to stop the cars and prevent their unnecessary forward movement. This will be found useful in switching cars off on turn-outs and branch tracks as the attendance of a brakeman on the detached cars will not be necessary.

The arrangement of the rods I, I, L, L, chains p, r, H', and pulleys J, J, M, M, and shaft G, admit of a very efficient action of the weight H, as said arrangement of parts is on the principle of the tackle, and it may be duplicated if it is desired to increase the efficiency of the weight H.

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

1. The combination of the self adjusting spring bearings, D, with the main shaft C, substantially in the manner and for the purposes herein shown and described.
2. The employment of the adjustable weight H, in combination with the main shaft C, lever F, shaft G, and the shoes K, N, in the manner and for the purposes herein shown and described.
3. The general arrangement together and with each other of the above specified parts, as herein shown and described.

LUCIUS PARKER.

Witnesses:

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