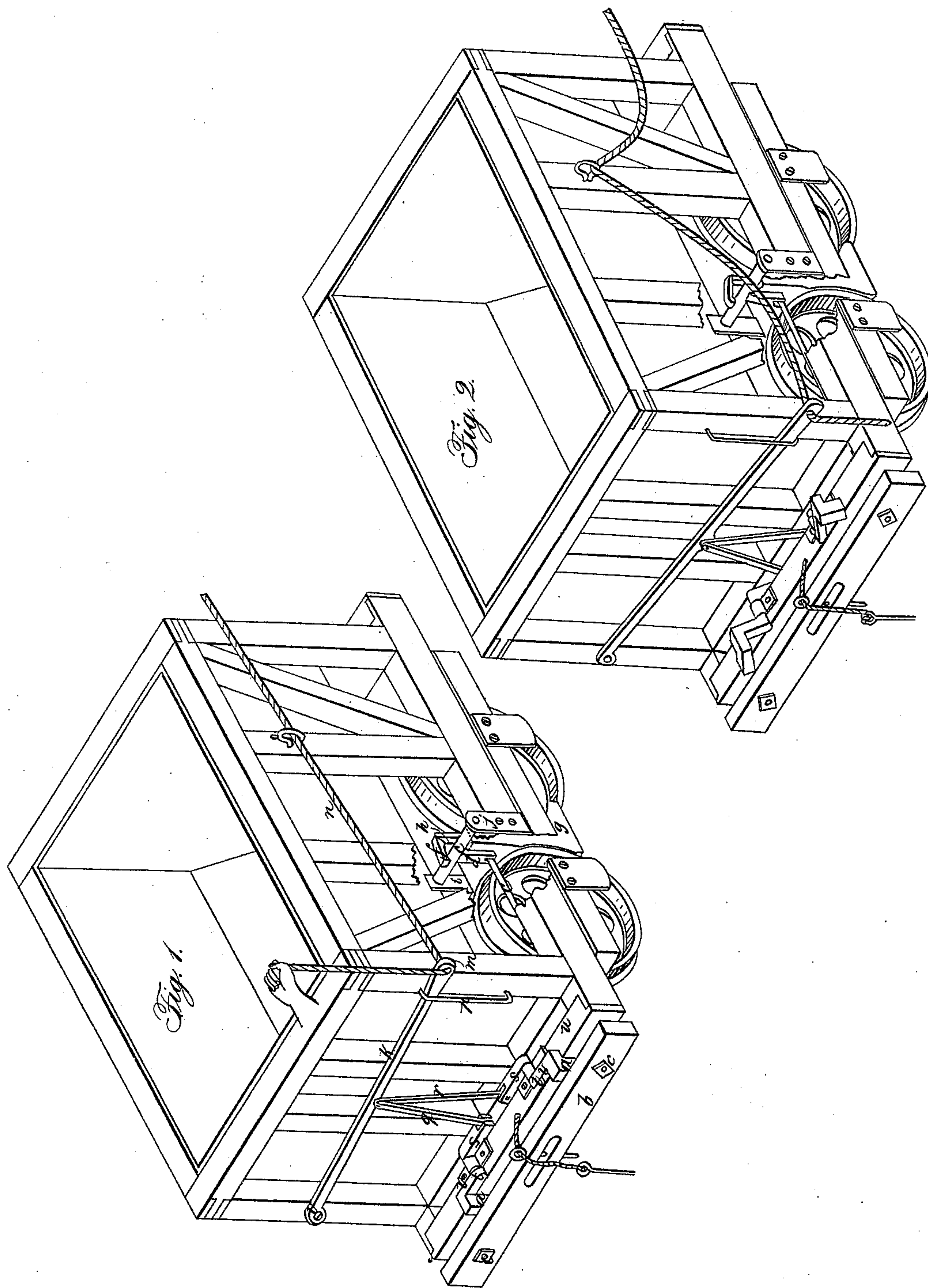


J. SCHOENHERR.

Car Brake.

No. 9,189.

Patented Aug. 10, 1852.



UNITED STATES PATENT OFFICE.

JOHN SCHOENHERR, OF READING, PENNSYLVANIA.

RAILROAD-CAR BRAKE.

Specification of Letters Patent No. 9,189, dated August 10, 1852.

To all whom it may concern:

Be it known that I, JOHN SCHOENHERR, of the city of Reading, in the county of Berks and State of Pennsylvania, have invented a
5 new and useful Mode of Rendering Brakes on Railroad-Cars Inoperative at the Pleasure of the Engineer or Man in the Tender, thus dispensing with a corps of brakemen; and I do hereby declare the following to be
10 a full, clear, and exact description of the same, reference being had to the annexed drawing, in which—

Figure 1 represents a car (such as are used for carrying coal) with the brakes rendered inoperative by my mode, the figure
15 being in isometrical perspective, and Fig. 2 is a similar drawing the brakes being free to act.

The nature of my invention consists in
20 providing a pair of drops, in front of each car, so arranged as to be simultaneously acted upon throughout the whole train of cars and to be interposed between the brakes, so as to render them inoperative at the pleasure of the engineer or other person upon the
25 locomotive or tender, when it is desired to back the train; the pressure from the locomotive being received on these drops as it is transmitted through the brake-beam to the
30 body of the car; the cross or brake-beam which operates the brakes on any one car being fixed and motionless when the drops are down, that is between the brake-beam and the car-frame. It will be observed that
35 I leave the brakes free to act at all times unless the engineer or other person about the locomotive sees cause to throw them out of action. When the distance between the locomotive (and tender) and the first car, and
40 the distance between each car is successively reduced by slacking the speed of the locomotive, if this be done with a view to back the train on a sudden emergency or even leisurely, my arrangement and method of operating the drops, gives in the interval of
45 time thus occupied, free and operative facility to the hand on the tender to take up the slack of the rope the tension of which throws down the drops and holds the drops down
50 between the brake-beam and the frame-beam, ready for instant backing of the train. If the train is not to be backed, the brakes are left in full operation. If the train after being brought to a stand is again to be put in
55 motion, the slack of the rope is taken up while the locomotive is made to advance far

enough to release the brakes and the drops are ready for instant action as the locomotive is made to retrograde and back the train.

It will be observed that the arrangement leaves no strain upon the rope except the mere lifting of one end of a bar, the other end being a fulcrum and the midway attached by light links to the counter-balance
60 of the drops, all clogging in any one brake throughout the whole train being thus obviated and every brake being equally responsive to the tension of the rope and the rope too always ready for tension whether
70 the track be a curve or straight stretch.

My arrangement has nothing in itself antagonistic to the object in view. The rope is always slack and by its own weight and motion when the train is under way keeps
75 the drops out of the way of the brake, so that nothing but a positive and malicious interference can put the combination out of order. Its certainty of action can therefore be trusted to, by day or night.

I take any car and arrange the brakes so as to be operated by a cross beam (*b*) when this beam is pressed upon by the locomotive being put under diminished speed. This beam extends the full breadth of the car and
85 is on either side of the car attached to a rod (*c*) which is jointed to an arm (*d*) on a short shaft (*e*) having another arm (*f*) nearly at right angles to the arm (*d*) the arm (*f*) being connected to the rubber (*g*)
90 by a link (*h*). The shaft (*e*) is hung on suitable standards (*i*) and (*j*) and directly above the front edge of the rubber. The coupling between the cars must be arranged so as to carry the beam (*b*) from the car
95 front whenever the locomotive advances. Iron pins attached to a suitable rope or chain as represented will effect this.

On and athwart the front of each car a lever (*k*) lies. It is jointed at its end (*l*)
100 to the car and has a loop or eye (*m*) at its other end, through which loop a chain or rope (*n*) passes. This chain or rope (*n*) runs the entire length of any train; passing through an eye (*o*) on the side of each
105 car and being suitably arranged on the tender to a windlass or other convenient device for tightening or slackening it at the pleasure of the engineer or hand in the tender. A clasp (*p*) determines the range
110 of the lever and keeps it in position for action. From midway of this lever (*k*) two

links (*q*) and (*p*) descend and are jointed to arms (*s*) on shafts (*t*) hung in suitable boxes on the frame-beam (*u*) of the car, the shafts lying in their length lengthwise of the car and a suitable distance apart. These shafts are very short and have arms (*v*) on their front ends, these arms projecting in the same plane from the shaft as the arms (*s*) but from the opposite side of the shaft so as to counter balance them. From these arms (*v*) drops (*a*) of suitable thickness and length and at right angles to these arms are fixed, so that when thrown down they pass between the brake-beam (*b*) and the front frame beam (*u*) of the car and thus interposed prevent the pressure of the locomotive and cars upon each other from operating the brakes, the beam (*b*) being thus prevented from approaching the beam (*u*). The links (*q*) and (*r*) and the arms (*s*) are arranged so as to be a counterbalance to the arms (*v*) and the drops (*a*), thus relieving the bar (*k*) from any strain that may make it bite the rope (*n*); and the rope (*n*) also having such length of sway as to prevent any bite of it on the lever (*k*) or vice versa, the rope being made fast to the last car of the train.

When it is desired to slack speed or stop the train the speed of the locomotive is reduced, so that the cars successively press upon each other, after the first has pressed upon the tender and this upon the locomotive when these last two are separate. The brake-beams are thus forced back upon the frame-beams and the rubbers drawn up against the wheels.

When it is desired to back the train if the brakes are not in action, it is only necessary to draw taut the rope or chain (*n*) and this throws down the drops (*a*) and prevents the retrograde motion of the locomotive from elevating the rubbers. The train is consequently free to move back. If the brakes are in action (as may be the case upon the instant of stopping a train) it is only necessary to cause the locomotive to advance sufficient to draw the beam (*b*) forward, so that the rope being drawn taut during this interval the drops (*a*) can be thrown down between the beam (*b*) and the beam (*u*), so soon as there is room for them.

This being done, the train is ready for backing and the whole can be effected by the engineer or tender-hand.

Having thus fully described and represented the nature and operation of my improved mode of rendering rail road car brakes inoperative at the pleasure of the engineer or man in the locomotive tender and thus dispensing with a corps of brakemen, what I claim therein as new and desire to secure by Letters Patent of the United States is—

The method of arranging and operating the parts which render the brakes inoperative at the pleasure of the engineer or other hand; viz, hanging the drops (*a*) from arms (*v*) on arbors (*t*) with arms (*s*) projecting in a contrary direction to the arms (*v*), the arms (*s*) being connected by links (*q*) and (*r*) midway to a lever (*k*) the end (*l*) of which is the fulcrum, the power being applied to the other end, through the eye (*m*) by means of the rope (*n*) which passes through loops (*o*) along the entire train to the rear end of which it is made fast; the same devices being repeated and capable of instantaneous action on each car—this arrangement thus having nothing in itself antagonistic to the end in view; the rope (*n*) being always slack, and by its own weight and motion, when the train is under way, keeping the drops (*a*) up and out of the way of the brakes, so that the brakes are always operative unless the engineer by winding up the rope (*n*) throws down the drops (*a*) and renders the brakes inoperative for the time being; the whole being substantially as described and represented; by no means intending to claim however, the interruption of the operation of brakes, actuated by the crowding of the cars upon the locomotive, by the interposition of drops, when these are interposed by mechanism the weight and motion of which when the train is under way is antagonistic to the counterbalance intended to keep the drops up and out of the way of the brakes.

JOHN SCHOENHERR.

Attest:

THOS. G. CLINTON,
JOHN H. JOHNSON.