

N. POTTER.  
Car Brake.

No. 19,260.

Patented Feb. 2, 1858.

Fig. 1.

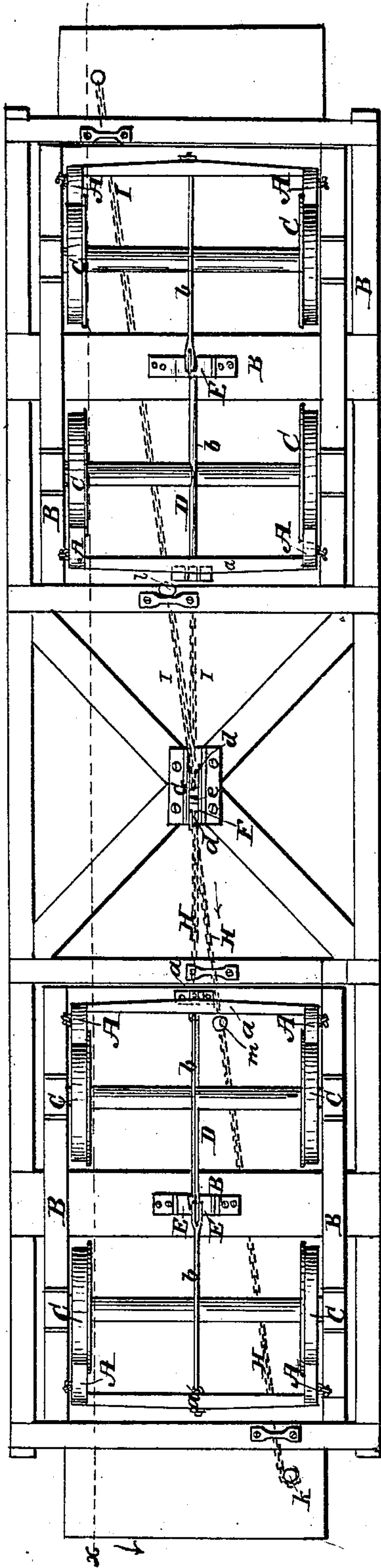
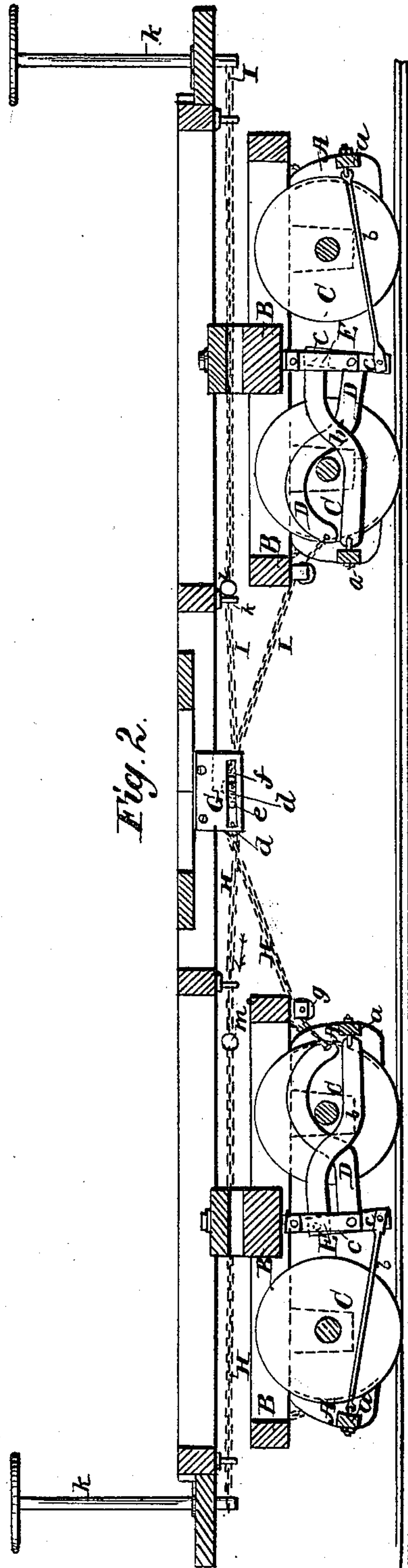


Fig. 2.





# UNITED STATES PATENT OFFICE.

NATHANIEL POTTER, OF HILLSDALE, MICHIGAN.

## RAILROAD-CAR BRAKE.

Specification of Letters Patent No. 19,260, dated February 2, 1858.

*To all whom it may concern:*

Be it known that I, NATHANIEL POTTER, of Hillsdale, in the county of Hillsdale and State of Michigan, have invented a new and useful Improvement in Railroad-Car Brakes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, Figure 1 being a bottom view of the trucks and the frame of a car provided with my improved brake; and Fig. 2, a longitudinal vertical section thereof in the plane indicated by the line *x, x*, Fig. 1. Like letters designate corresponding parts in both figures.

The rubbers *A, A*, are suspended from the truck-frames *B, B*, so as to be pressed against the car-wheels *C, C*, in the usual manner. From the center of the connecting bar *a*, of each pair of rubbers of each truck, extends a rod *b*, each pair of rods meeting beneath the middle of the truck-frame, and respectively jointed to the opposite arms of the cross-head *c*, of a lever *D*. Each lever *D*, is pivoted at the center of the cross-head, to the lower end of a hanger *E*, which is suspended, by a joint, from the center of the truck-frame above, so as to allow a perfectly free movement of the lever *D*. Thus, when the long arm of the lever *D*, is raised, the arms of the cross-head *c*, are caused to move in opposite directions, thereby drawing all the rubbers against the wheels with equal force.

Beneath the center of the car-frame is situated a block *F*, provided with two sheaves *d, d*, said block and sheaves being denominated the "oscillator." It has a free, oscillating movement upon a central pivot *e*, which slides freely in slots *f*, in the cheeks of a supporter *G*, attached to the bottom of the car-frame.

Chains *H*, and *I*, which are attached respectively to the long arms of the levers *D, D*, pass upward over pulleys *g, g*, and thence extend around the sheaves *d, d*, of the "oscillator" *F*; thence backward, in a reverse direction, through stops *h, i*, to the shafts *k, k*, of the brake-wheels, to which they are attached in the usual manner. Balls *l* and *m*, or their equivalents, are secured to the chains, at suitable distances from the stops *h, i*, which are firmly secured to the bottom of the car-frame, so that when either of said balls is brought in contact with its respective stop, further motion of the chain to which it

is attached is prevented. The chains *H* and *I*, together with the "oscillator" *F*, constitute a tackle, by which double power is exerted, in raising the ends of the levers *D, D*, and consequently upon the brakes. The arrangement also allows the brakes of both trucks to be actuated simultaneously, by the application of power at one end only.

If an equal power is applied at each of the brake-wheels *k, k*, simultaneously, the "oscillator" will remain in the center of the supporter *G*. But if only one of the brake-wheels is in operation, so as to act upon the chain *H*, for instance, said chain *H*, moving in the direction indicated by the arrow, will cause the "oscillator" *F*, to be drawn in the same direction, thereby drawing the upper portion of the chain *I*, in the same direction, till its ball *l*, strikes the stop *h*, which, consequently, arrests the further progress of that portion of the chain *I*. One end of the chain being thus firmly held, the other, or lower, portion, which is secured to the lever *D*, is drawn forward by the "oscillator." Thus, as the chain *H*, is wound around the shaft of the brake-wheel, it acts upon the levers of both trucks, and causes all the rubbers to be pressed against the wheels with equal pressure. If the brake-wheel of the chain *H*, is not in action, the same effect will be produced by applying the power to the other chain, in a similar manner.

Without the balls *l* and *m*, to complete the device of the "oscillator" tackle, both brake-wheels of the car would have to be put in action together, or one of them would have to be kept locked, while the other should be in action; but by using the said balls, either brake-wheel may be actuated separately, irrespective of the other; while the balls do not interfere with the free use of both brake-wheels together, if desired.

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

The combination of the balls *l, m*, and stops *h, i*, with the chains *H, I*, and "oscillator" *F*, arranged and operating substantially in the manner and for the purpose herein specified.

The above specification of my improved railroad car brake, signed by me this 24th day of October, 1857.

NATHANIEL POTTER.

Witnesses:

C. L. TRAVIS,  
R. D. TRAVIS.