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R. J. WILSON & A. SNYDER.

CAR BRAKE.

No. 253,249. Patented Feb. 7, 1882.

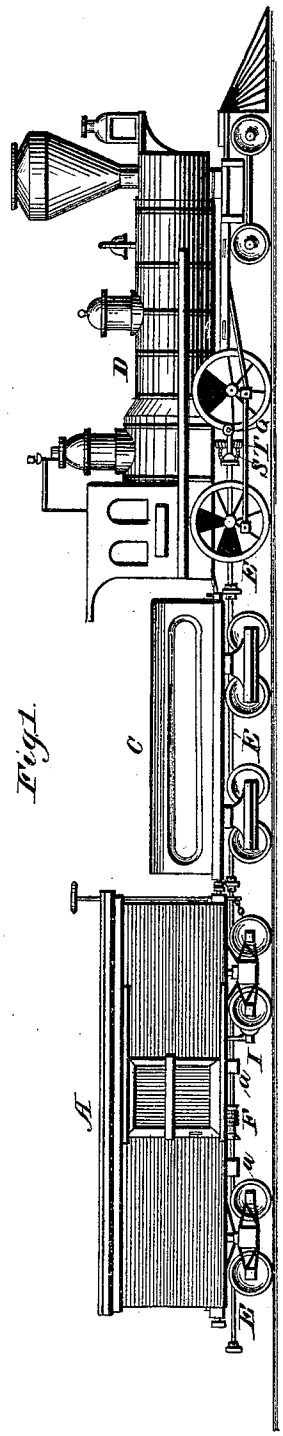


Fig. 1.

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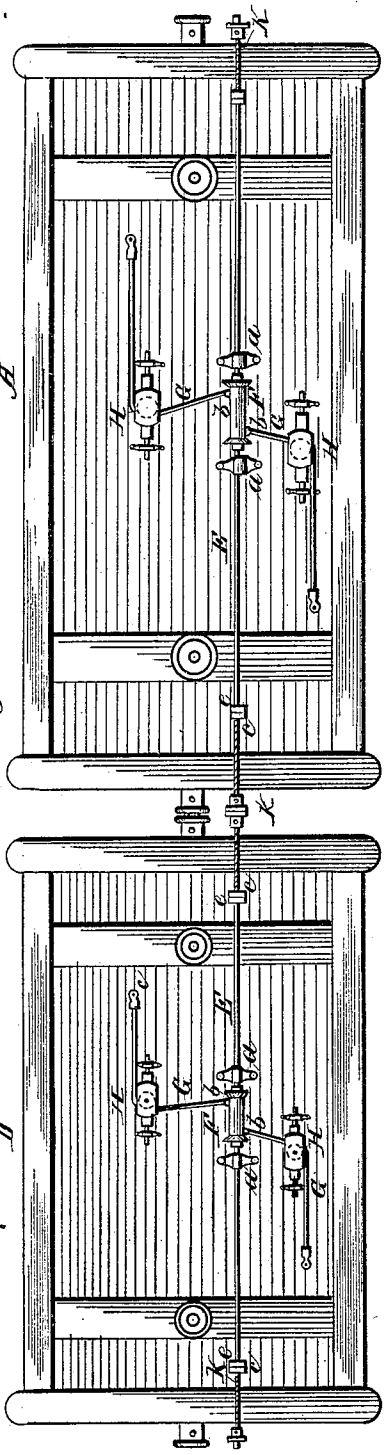


Fig. 2.

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Fig. 3.

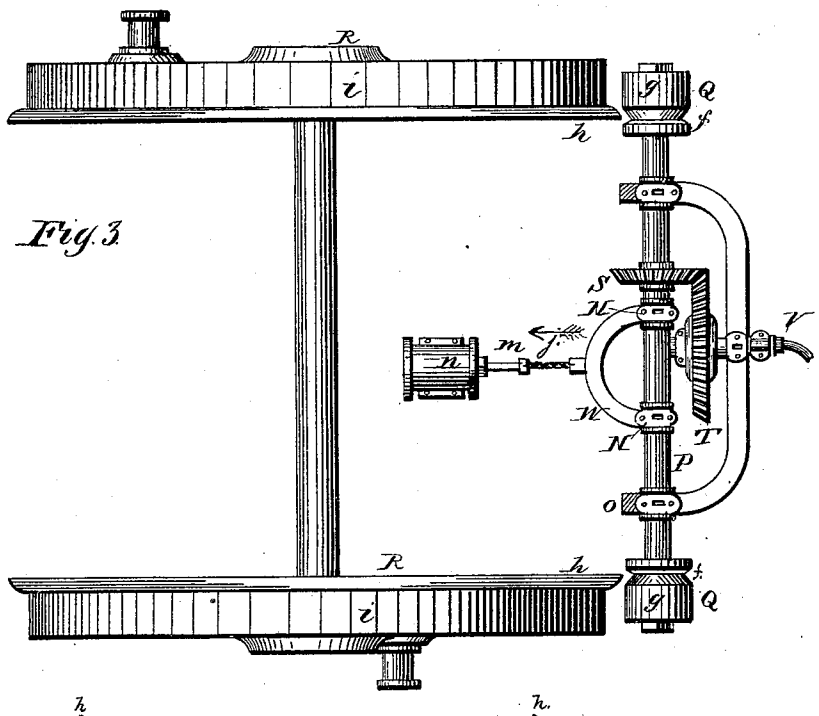
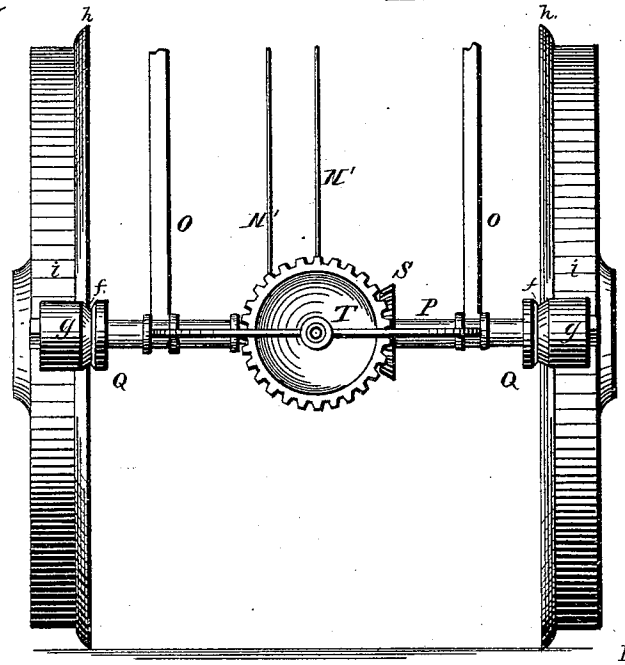


Fig. 1.



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Fig. 4.

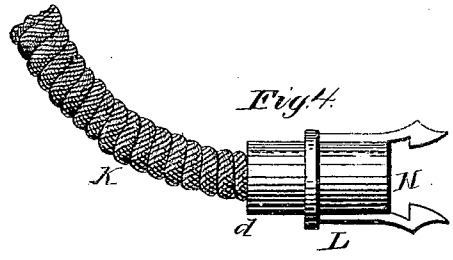


Fig. 5.

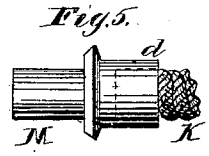


Fig. 8.

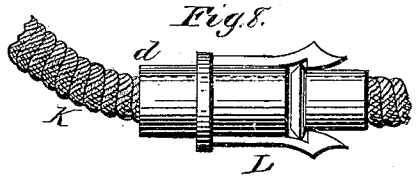
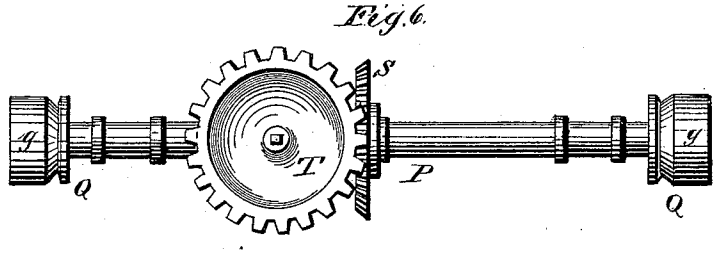


Fig. 6.



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UNITED STATES PATENT OFFICE.

ROBERT J. WILSON, OF PITTSBURG, AND AUGUST SNYDER, OF ALLEGHENY, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 253,249, dated February 7, 1882.

Application filed May 27, 1881. (No model.)

To all whom it may concern:

Be it known that we, ROBERT J. WILSON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, and AUGUST SNYDER, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Car-Brakes; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our invention relates to an improvement in novel means for manipulating the braking mechanism of railway-cars through the medium of a shaft, or a series of shafts, forming a continuous line corresponding to the number of cars and length of train by coupling said shaft or shafts between the cars and to the tender or locomotive by means of flexible connections and revolving the shaft or shafting by means of a suitable motor, as will hereinafter more fully appear.

To enable others skilled in the art with which our invention is most nearly connected to make and use it, we will proceed to describe its construction and operation.

In the accompanying drawings, which form part of our specification, Figure 1 is a side elevation of a freight-car tender and locomotive provided with our improvement. Fig. 2 is an inverted view of a car and tender for a locomotive, representing our improvement and its connections and relation to the brake-levers for the wheels of the car or cars. Figs. 3, 4, 5, 6, 7, and 8 are detail views, which will hereinafter be fully explained.

In the accompanying drawings, A represents a freight-car of the ordinary construction.

C represents the tender for the locomotive D.

To the under side of the car-body, or to its running-gear, is pivoted in bearings *a* a shaft, E, furnished with a drum, F, to which, at *b*, is attached a chain or wire rope, G, which passes over a pulley, H, and is connected to the brake-lever, I, which may be of ordinary construction and operation; but other forms of brakes may be used, if so desired, such as is shown in Fig. 6, the construction and operation of which are well understood in railway-engineering and railway-car construction, and therefore need not be further described in this specification.

To the shaft E is attached, at *c*, a flexible section, K, constructed of wire rope, such as is used for transmitting a revolving motion to drilling mechanism, and is well understood by machinists. To the end of this flexible section K of the shaft at *d* is attached a spring-coupling, L, which couples with the male part M on the flexible section K attached to the end *e* of the shaft E. The construction of the two parts L and M of the coupling for the flexible sections K, and the operation of said coupling is well understood, and is clearly shown in Figs. 4, 5, and 8.

To the locomotive is suspended in pivoted bearings O a shaft, P, on the ends of which are rigidly fixed pulleys Q, having groove *f*, corresponding in size, depth, and form to the size and contour of the flange of the driving-wheels R, so that the face *g* of said pulleys will fit the face of the flange *h* and tread *i* of the driving-wheels R. The shaft P is furnished with a bevel-wheel, S, which meshes into a bevel-wheel, T, the axis of which has its bearing in the yoke U, which is attached to the pivoted hangers O.

To the axis of the bevel-wheel T is attached a section, V, of the flexible shafting, used for the purpose of coupling the shaft or shafts E and flexible sections K with the bevel-wheel T.

To the shaft P is pivoted a yoke, W, suspended by pivoted hangers N′, and to said yoke is attached a piston, *m*, of a steam-cylinder, *n*, or to a hand-lever for moving forward the shaft P at the will of the operator.

The skillful mechanic will readily understand the construction and the relation that the several parts bear to each other from the foregoing description, and by reference to the accompanying drawings, therefore we will proceed to describe the operation, which is as follows:

The operator admits steam to the cylinder *n*, so that its piston will move in the direction indicated by the arrow *j*, which will move forward the shaft P and bring the pulleys Q against the driving-wheels R, which will cause the shaft P and its wheel S to revolve, which will revolve the flexible sections V K and shaft

E, thereby causing the drum F to wind on the chain or wire rope G, which will draw the brake-lever I so as to apply the brakes to the car-wheels with such force as the operator may elect, which, of course, will be in proportion to the traction of the pulleys Q against the driving-wheels R. The springs and gravitation of the brake-levers will release the brakes as soon as the draft is taken off the shaft P.

In the absence of the cylinder *n* a hand-lever may be employed for moving forward the shaft P and its pulleys Q, for the purposes hereinbefore stated.

Having thus described our improvement, what we claim is—

1. The combination, with a shaft or shafts, coupled by flexible connections, and provided with a wheel, T, of a movable shaft having pulleys adapted to engage with the car-wheels, and a wheel to engage the wheel T, substantially in the manner as and for the purpose specified.

2. In a mechanism for operating the brake-levers of brakes for railway-cars, the combination, with a revolving shaft or shafts coupled through the medium of flexible connections, of movable mechanism adapted to be thrown into engagement with the rim of the car wheel or wheels, and thereby communicate motion to said shaft or shafts, substantially in the manner herein shown and described.

3. In a mechanism for operating the brake lever or levers of brakes for railway-cars, a revolving shaft or shafts coupled through the medium of a flexible section of wire rope and coupling L M, substantially in the manner herein shown and described.

4. The shaft P, having pulleys Q and wheel S, in combination with the wheel T, coupled to a shaft or shafts through the medium of a flexible section, substantially as herein described, and for the purpose set forth.

ROBERT J. WILSON.
AUGUST SNYDER.

Witnesses:
A. C. JOHNSTON,
JAMES J. JOHNSTON.