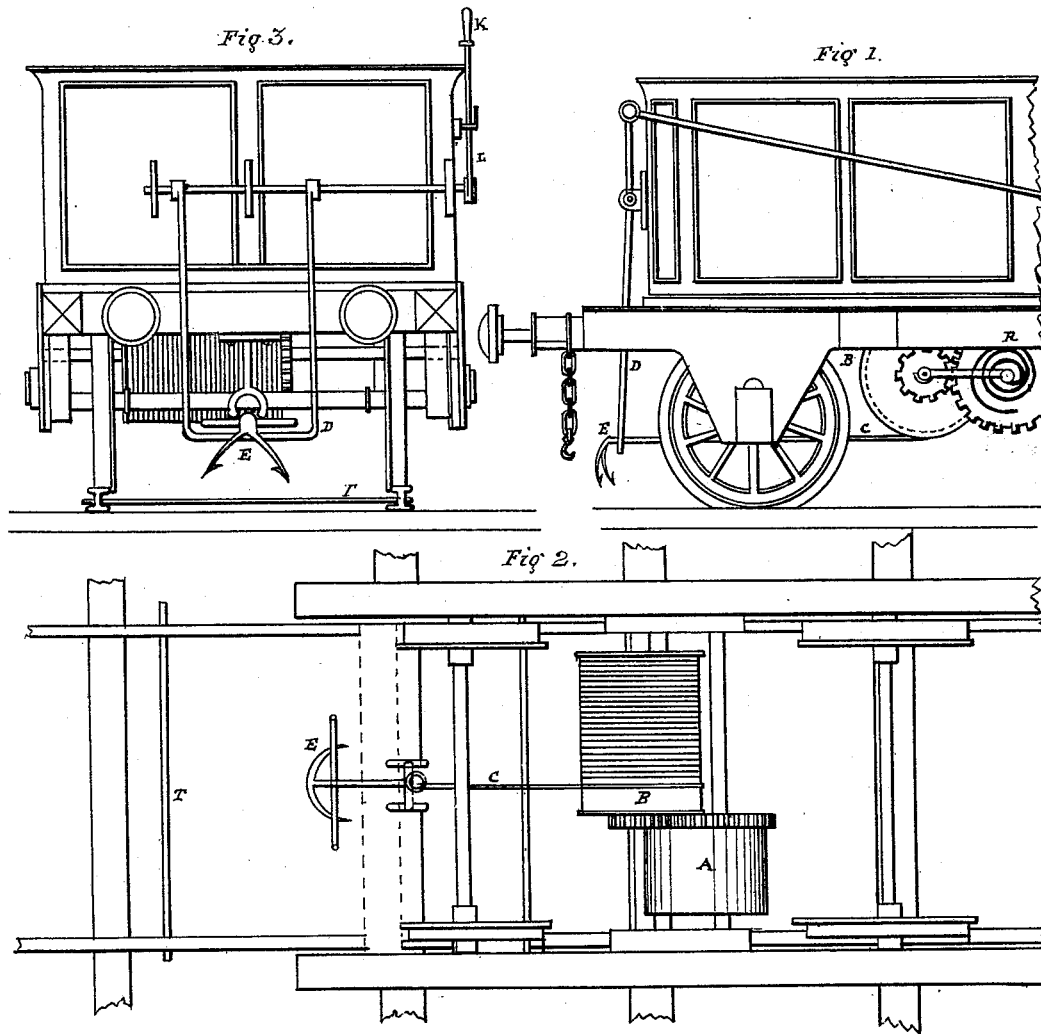


P. L. V. VERON & E. EDELINE.  
Railway-Car Brake.

No. 213,714.

Patented Mar. 25, 1879,



Witnesses:

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# UNITED STATES PATENT OFFICE.

PAUL L. V. VÉRON AND EMILE EDELINE, OF PARIS, FRANCE.

## IMPROVEMENT IN RAILWAY-CAR BRAKES.

Specification forming part of Letters Patent No. **213,714**, dated March 25, 1879; application filed July 16, 1877.

*To all whom it may concern:*

Be it known that we, PAUL LOUIS VICTOR VÉRON and EMILE EDELINE, both of the city of Paris, in the Republic of France, have invented an Improved Railway-Brake, of which the following is a specification:

This invention has reference to certain improvements in brakes for stopping trains quickly, if not instantaneously, without violent shock; and consists in the application of a powerful box or barrel spring and cog-wheel in combination with a drum, round which a cable is wound, and an anchor or grappling-iron, in the following manner.

Figure 1 is a side elevation of a tender, beneath which the apparatus is fixed. Fig. 2 is a plan of the same, showing the mechanism, the frame only of the tender being shown. Fig. 3 is an end of the tender, showing the apparatus and its support.

The apparatus would be supported beneath the tender, as shown by the drawings, or may be placed under the carriages or wagons, as may be desired.

R is the spiral spring, which would be in a box or barrel similar to that in clock-work. This barrel bears at its side a cog-wheel, which communicates the movement it receives from the spring R to the drum B by aid of another wheel fixed to the drum, and round which the cable is wound.

Both the drum and box-spring are borne by their axes in supports or bearings, which allow them to turn freely. The drum maintains the cable when the spring is at rest, as shown by the Figs. 2 and 3.

The cable C is simply an ordinary one, of a strength in proportion to requirements. One of its ends is fixed to the spring R or barrel, which keeps it coiled on the drum. To the other end of the cable an anchor or grappling-iron, E, is attached, and which, when the train

is in motion, is held in the support D, which liberates the anchor in case of danger by means of the lever L, the handle of which, K, is placed near the driver or fireman. The line of rail is furnished with metal traverses T, preferably arranged between the sleepers, so that the anchor may gripe them when liberated.

When it is desired to apply the brake, the stoker, or the fireman, moves the lever L, which instantly frees the anchor by its weight alone, and the barbs catch in the traverses T, and the cable is forcibly unwound from the drum, and augments the power of the spring. This power is increased, if desired, by adding to the number of springs, and is sufficient to stop a train without shock in a few seconds.

The invention, therefore, consists in the combination of a box or barrel spring, R, with a drum, B, round which the cable is coiled, and of an anchor or grappling-iron, E. This latter, by its simple weight being displaced by the lever L, gripes the traverses T, arranged along the line between the sleepers.

The number of machines employed will greatly increase and effect a certain and satisfactory result. Still only a few are necessary to satisfactorily bring the train to a stand.

We claim therefore—

The combination of the parts herein described, consisting of the barrel or box spring R and cog-wheel, gearing with the wheel on the drum B, bearing the cable C and anchor E, in conjunction with the traverses T, in the manner and for the purposes precisely as herein mentioned.

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