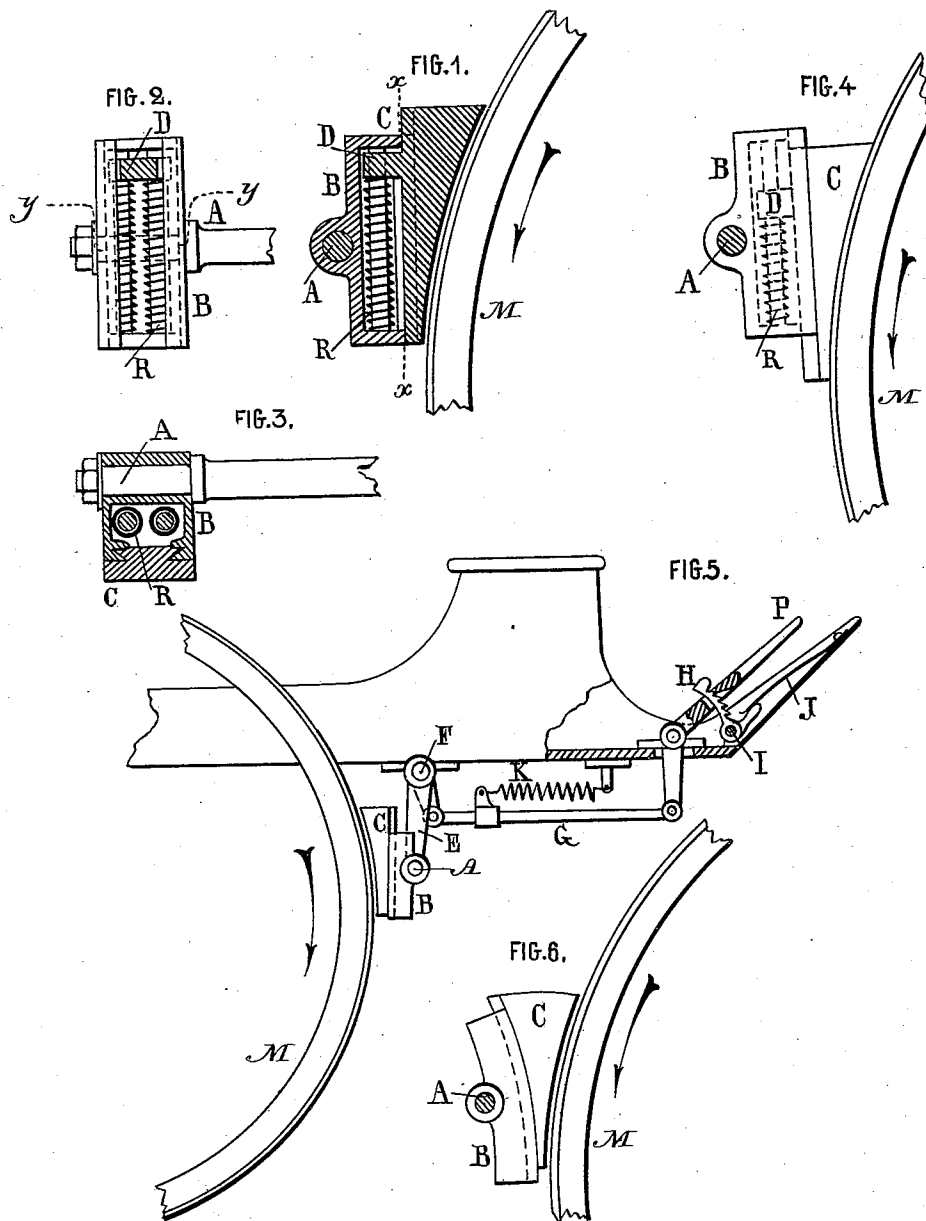


(No Model.)

J. DES GEORGES.
VEHICLE BRAKE.

No. 469,013.

Patented Feb. 16, 1892.



Witnesses

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UNITED STATES PATENT OFFICE.

JULES DES GEORGES, OF LYONS, FRANCE.

VEHICLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 469,013, dated February 16, 1892.

Application filed July 30, 1891. Serial No. 401,116. (No model.) Patented in France September 23, 1889, No. 200,928; in Belgium September 27, 1889, No. 87,863, and in England September 30, 1889, No. 19,397.

To all whom it may concern:

Be it known that I, JULES DES GEORGES, a citizen of the Republic of France, residing in Lyons, France, have invented an Improvement in Vehicle-Brakes, of which the following is a specification.

This invention was patented in France September 23, 1889, No. 200,928; in Great Britain September 30, 1899, No. 19,397, and in Belgium September 27, 1889, No. 87,863.

The object of the present invention is to cause the friction of the wheel against the brake-shoe to increase the pressure and friction, and thereby render the brake automatic and lessening the work to be performed by the driver or conductor in applying such brakes.

In carrying out this invention the brake-shoe is wedge-shaped and the friction tends to move the wedge endwise and increase the pressure of such wedge-shaped shoe upon the wheel, and springs are employed to restore the brake-shoe to its normal position when the friction upon such shoe is sufficiently lessened.

In the drawings, Figure 1 is a vertical section illustrating the said improvement. Fig. 2 is a section at the line xx . Fig. 3 is a section at the line yy . Fig. 4 is an exterior elevation representing the brake-shoe as in use. Fig. 5 is an elevation, partially in section, illustrating a device that may be employed for giving motion to the brake. Fig. 6 is an elevation representing a curved wedge.

Wheel-segments or portions of the felloes and tire are represented at M, and the brake itself is supported by a cross shaft or bar A in any usual manner, and with stages and similar vehicles the brake is usually applied at the front portion of the hind wheels, and the shaft or cross-bar A is moved bodily toward or from the wheel by a lever or treadle and a cross-shaft with cranks; but these parts form no necessary portion of the present invention, as they may be varied to suit the vehicle to which the brake is applied.

The brake-stock B is received upon the cross-bar A, and the brake-shoe C is wedge-shaped and adapted to slide against the stock B, and the two parts are preferably connected by dovetails, as represented in Fig. 3, and the stock B is hollow for the reception of one or

more springs R, and there is upon the brake-shoe a lug or projection D extending out and resting upon the springs R, and it is usually preferable to employ helical springs surrounding vertical rods, which rods pass through the lug D, so that as the brake-shoe is moved downwardly the springs R are compressed, and when not otherwise acted upon the springs R raise up the brake-shoe and hold it in the elevated position represented in Figs. 1, 5, and 6. When the brake shoe and stock are moved toward the wheel so that the surface of the shoe is exposed to the friction of the wheel, the brake-shoe is moved downwardly and slides upon the stock and the spring or springs R are compressed, and in the downward movement the shoe acts as a wedge between the stock and the wheel, increasing the pressure of the shoe upon the wheel automatically and with sufficient force to prevent the wheel revolving, or nearly so; but as soon as the cross bar or shaft A is drawn back and the friction of the shoe upon the wheel relieved the springs R restore the brake-shoe to the normal position represented in Fig. 1.

It will be apparent that the surfaces of the shoe and of the stock may be either straight, as represented in Figs. 1, 4, and 5, or they may be curved, as represented in Fig. 6. In other respects the construction and operation are the same.

In Fig. 5 I have represented part of a wagon-body with a cross-shaft F and crank-arms E to carry the shaft or bar A, and the connecting-rod G extends from a crank upon the shaft F to the shorter end of the bent lever or treadle P, and the rack H, pivoted at I and provided with the spring J, is made use of for holding the treadle or lever P in the position to which it may be depressed in applying the brake. As soon as the rack H is released from the treadle P the spring K draws back the brake from the wheel and restores the parts to the normal position represented in Fig. 5.

Any suitable spring or its equivalent can be employed in place of the springs R, (represented in the drawings,) and the initial movement given to the brake-stock for bringing the brake-shoe into contact with the wheel may be derived from any suitable power or mechanism.

I claim as my invention—

1. The hollow brake-stock B and the cross shaft or bar A supporting the same, in combination with the wedge-shaped brake-shoe
5 sliding upon the hollow brake-stock and provided with dovetailed connections, and a spring within the hollow brake-stock, acting upon the lug or projection on the brake-shoe to restore the parts to their normal position,
10 substantially as set forth.

2. The hollow brake-stock B and the cross shaft or bar A supporting the same, in combination with the wedge-shaped brake-shoe

sliding upon the hollow brake-stock, and a spring within the hollow brake-stock, acting
15 upon the brake-shoe to restore the parts to their normal position, substantially as set forth.

The foregoing specification of my improvement in brakes for carriages signed by me
20 this 15th day of July, 1891.

JULES DES GEORGES.

Witnesses:

YVIN RACILLOU,
GASTON JEANNIAUX.