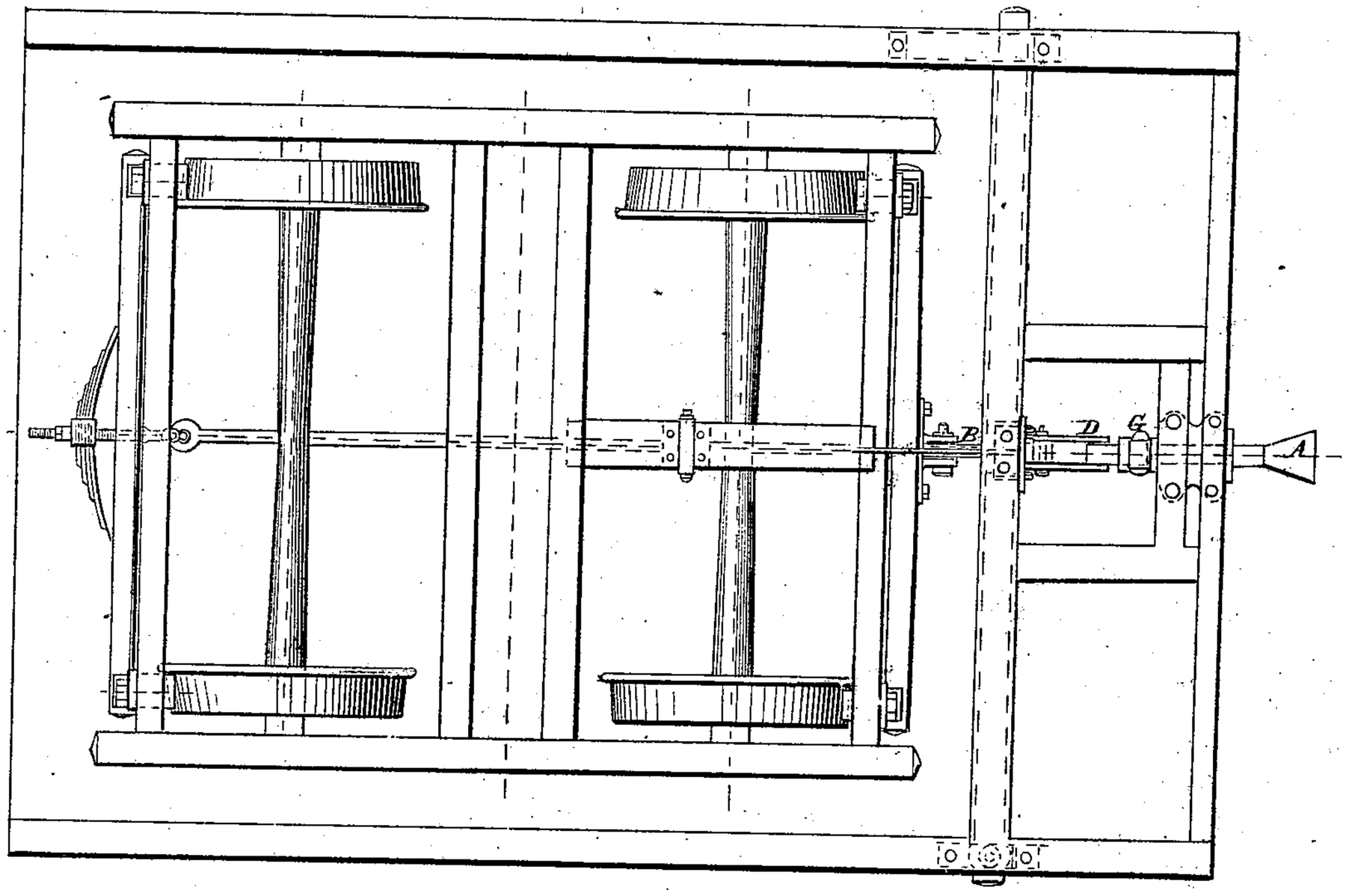
2 Sheets—Sheet 1.

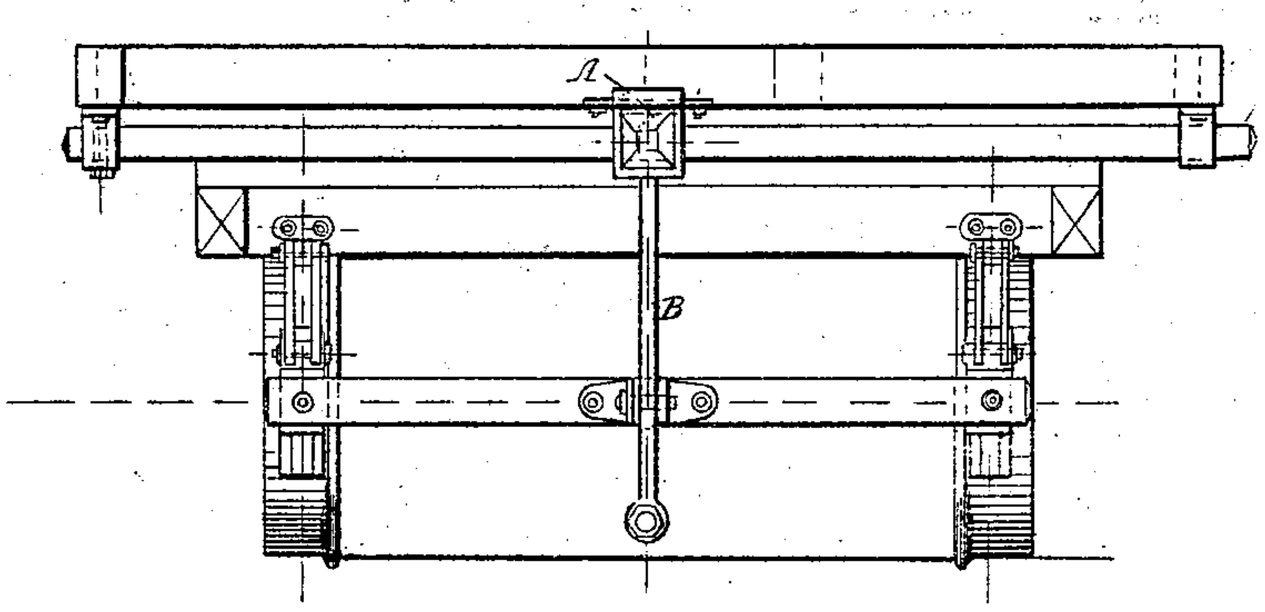
E. GUERIN.

Car Brake.

No. 23,768.

Patented Apr. 26. 1859.





Witnesses;
R Cushman
R S Archer

Inventor;
Edouard Guerin
By Joseph R Anderson
Attorney

2 Sheets—Sheet 2.

E. GUERIN.

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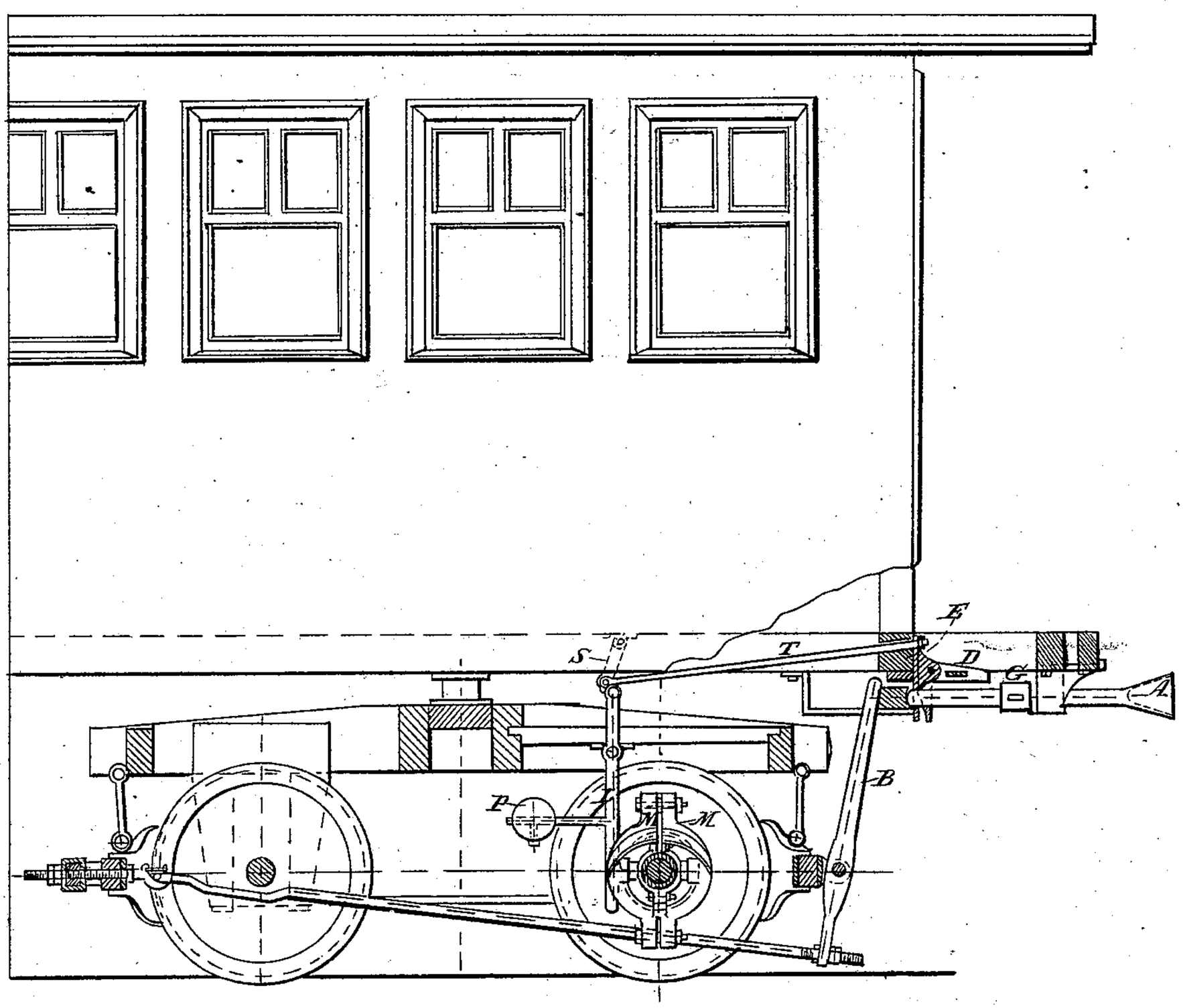

Witnesses;
R Arthur
R S Archer

Inventor
Edouard Guerin
By Joseph R Anderson
Attorney

UNITED STATES PATENT OFFICE.

EDOUARD GUÉRIN, OF PARIS, FRANCE.

SELF-ACTING APPARATUS FOR WORKING RAILWAY-BRAKES.

Specification of Letters Patent No. 23,768, dated April 26, 1859.

To all whom it may concern:

Be it known that I, EDOUARD GUÉRIN, civil engineer, residing in the city of Paris, Empire of France, have invented a new and Improved Self-Acting Apparatus for Working Railway-Brakes; and I do hereby declare that the following is a full and exact description of the same.

In the brakes generally used on railways the pressure of wooden blocks against the wheels is exerted by means of a crank worked by an attendant. In a railway train the number of attendants must be equal to the number of brakes. In my system, I make use, in order to work the brakes, of the pressure exercised upon the buffers of each carriage when the engine-driver checks the speed of the engine, by working the brake of the tender, for when the driver shuts up the throttle valves of the engine and works the brake of the tender, the engine is checked in its speed and opposes a great resistance to the speed of the train. This resistance as will be seen hereafter is transmitted immediately to the brakes of all the carriages by means of the disposition which I have invented. When the train is to be pushed back, it is essential that the tightening of the brakes should not take place. This condition, important in a self-acting system, has been resolved by making use of the very motion of the train as a regulator of the action.

Description.—In the annexed drawings A is a drawbar which connects the carriages. It is used for the drawing of the said carriages and receives equally the pressure which results from the checking or repulsive motion which may take place in front. I make use of this pressure of the carriages against each other to tighten the brakes. For this purpose, the extremity of the bar A presses the lever B which commands the brake. One may see by this that my system can be applied to any brakes existing on railways.

For pushing back the train, I make use of 1st, a forked piece D fixed upon the back cross E. The said piece D is articulated or hinged so as to fall down and serve as a support to the bar A or to rise in order to give a free motion to the said drawbar A. 2nd, a vertical lever L provided with a balance weight P which actuates the rod T which is suspended to the frame by the piece S. The other extremity of this rod is attached to the forked piece D. 3rd, a collar M of a peculiar form which is mounted upon one of the axletrees and is supported by two pivots, which pivots allow it to have a free motion when acted upon by centrifugal force. A groove of a suitable depth is cut into the collar.

When the train is in motion the position of the collar M is modified by the action of the centrifugal force as aforesaid and presents its grooved part to the lever L. The balance weight P then acts and causes the forked piece D to rise, thus releasing the drawing bar A and permitting it to transmit a sufficient action to work the brake through the influence of the resistance produced upon the train by the tightening of the tender's brake. On the contrary, when the train is at rest, the collar M is brought against the axletree by the action of a special spring and in this position presents its larger diameter to the lever L; thus the forked piece D is placed between the traverse of the frame E and the edge G of the draw bar. The forked piece D serves then as a support to the bar A. One may easily see that in this condition the train can be pushed back without being prevented by the brake, since the bar A can no longer have any motion in that position whatever may be the resistance or pressure encountered. The forked piece may also be worked by hand or by establishing a system of transmission through the whole train.

Having thus described my invention, I declare that what I claim is—

The forked piece D, vertical lever L provided with balance weight P, rod T and collar M, when arranged substantially as, and for the purpose, set forth.

I reserve to myself the right of varying or changing the forms, dimensions, proportions of accessories and matters employed.

EDOUARD GUÉRIN.

Witnesses:

HENRY W. SPENCER,

GEO. HUTTON.