

(No Model.)

2 Sheets—Sheet 1.

H. GALLAGER.
CAR BRAKE.

No. 410,513.

Patented Sept. 3, 1889.

Fig. 1.

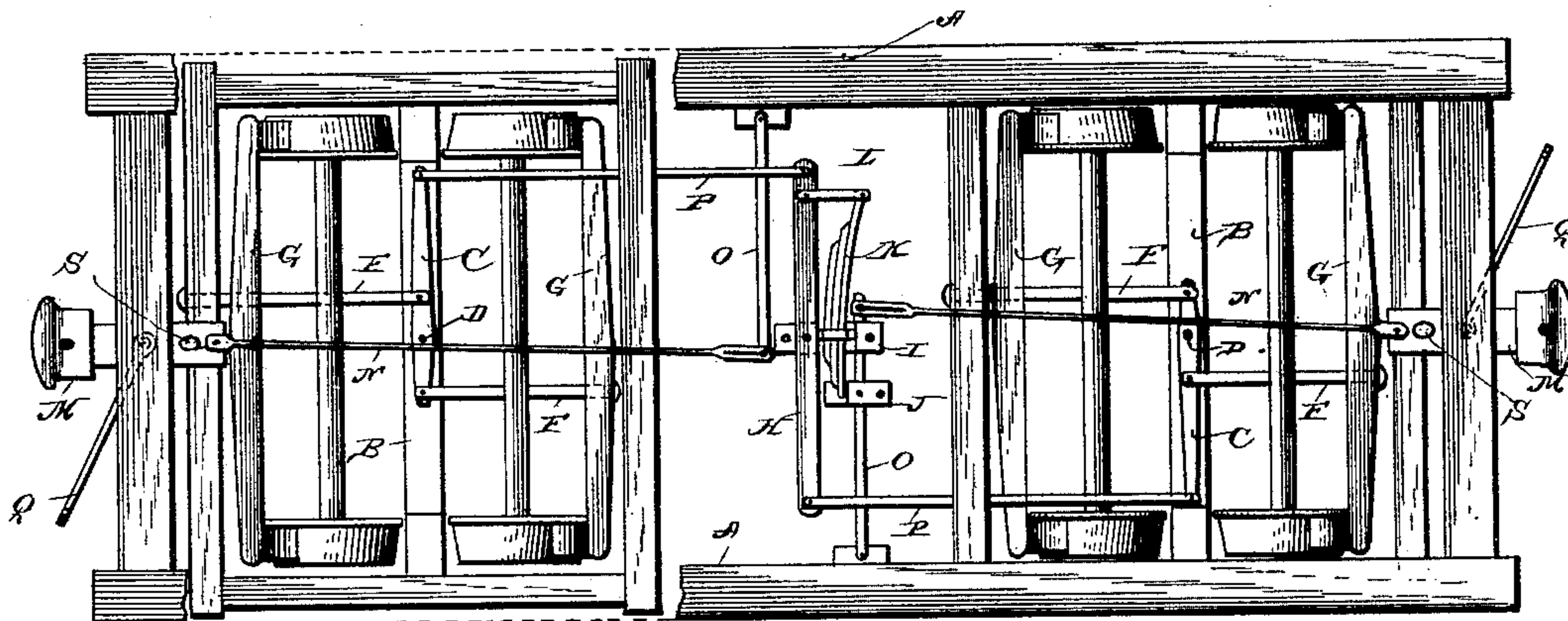


Fig. 2.

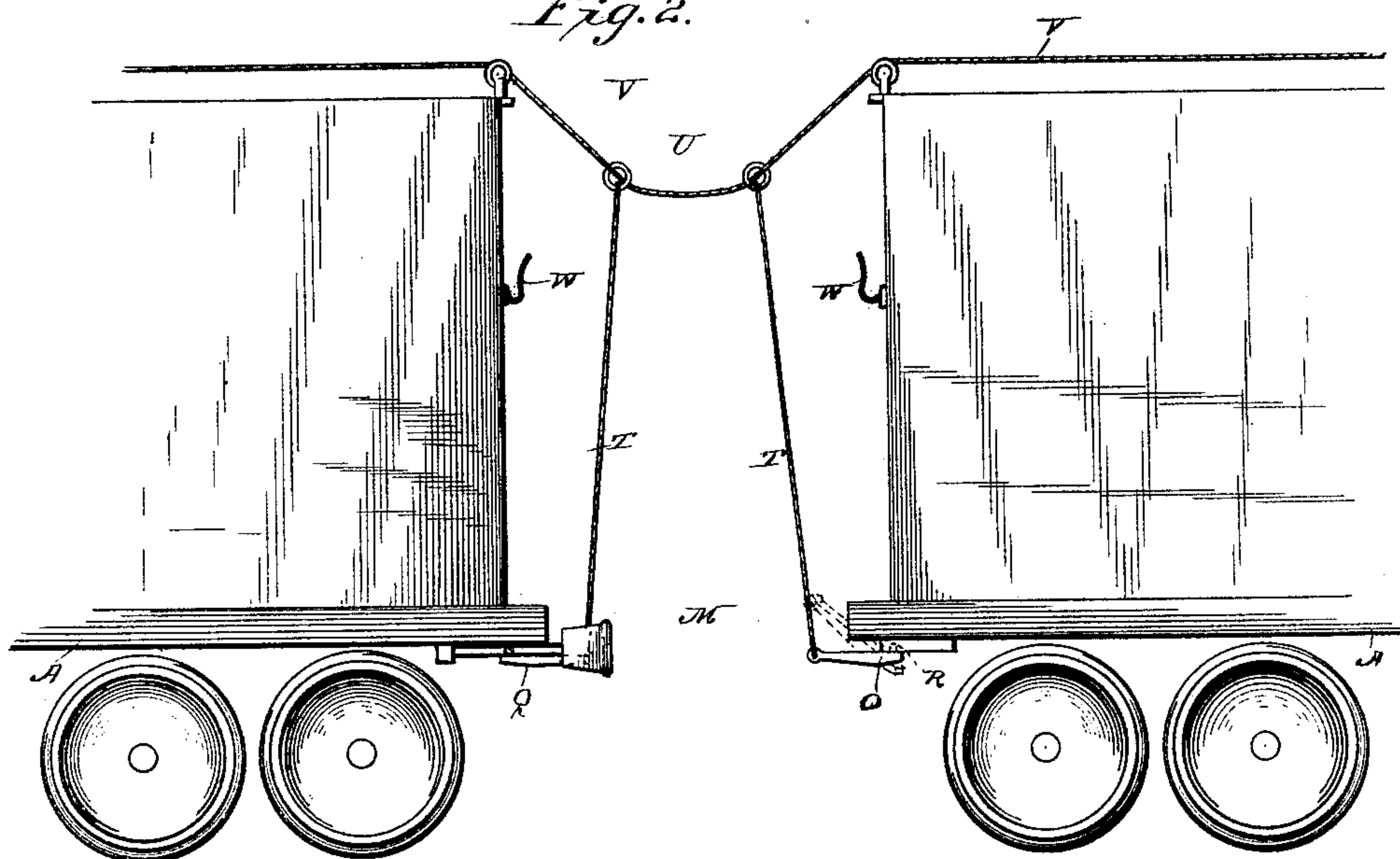
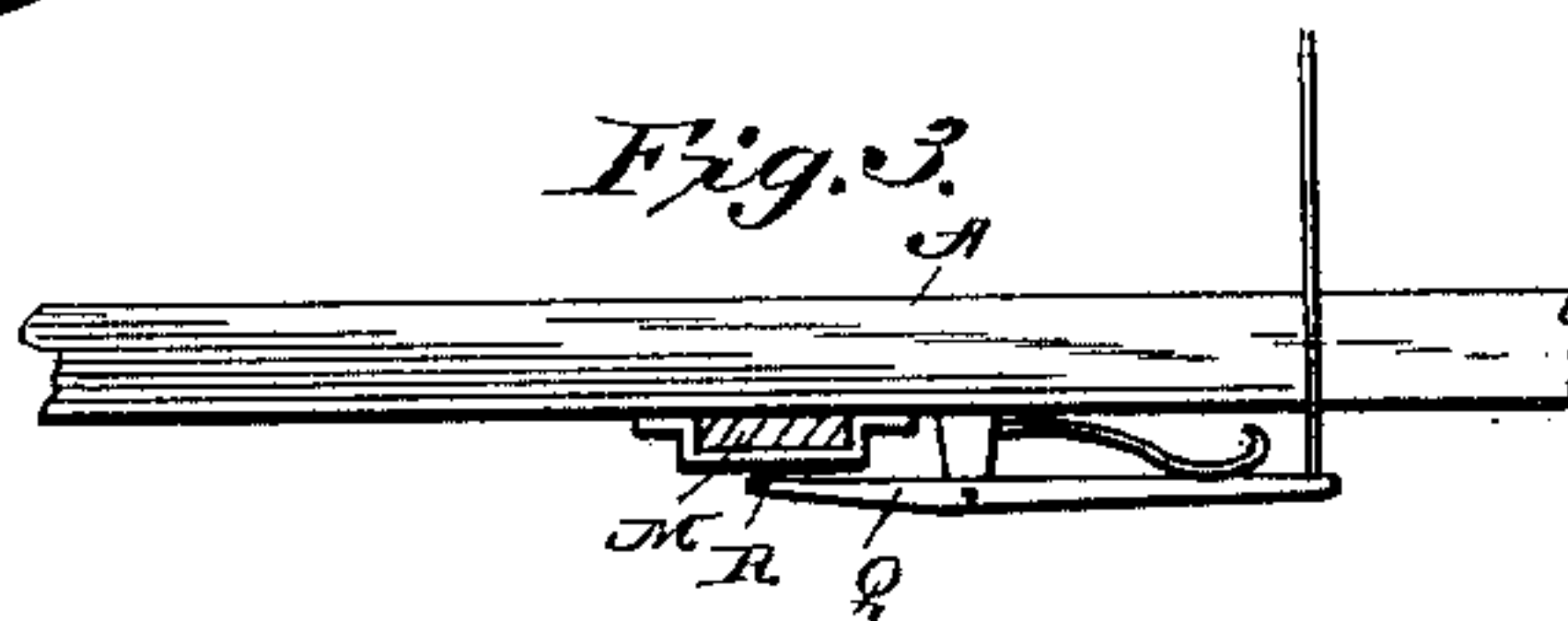


Fig. 3.



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Fig. 4.

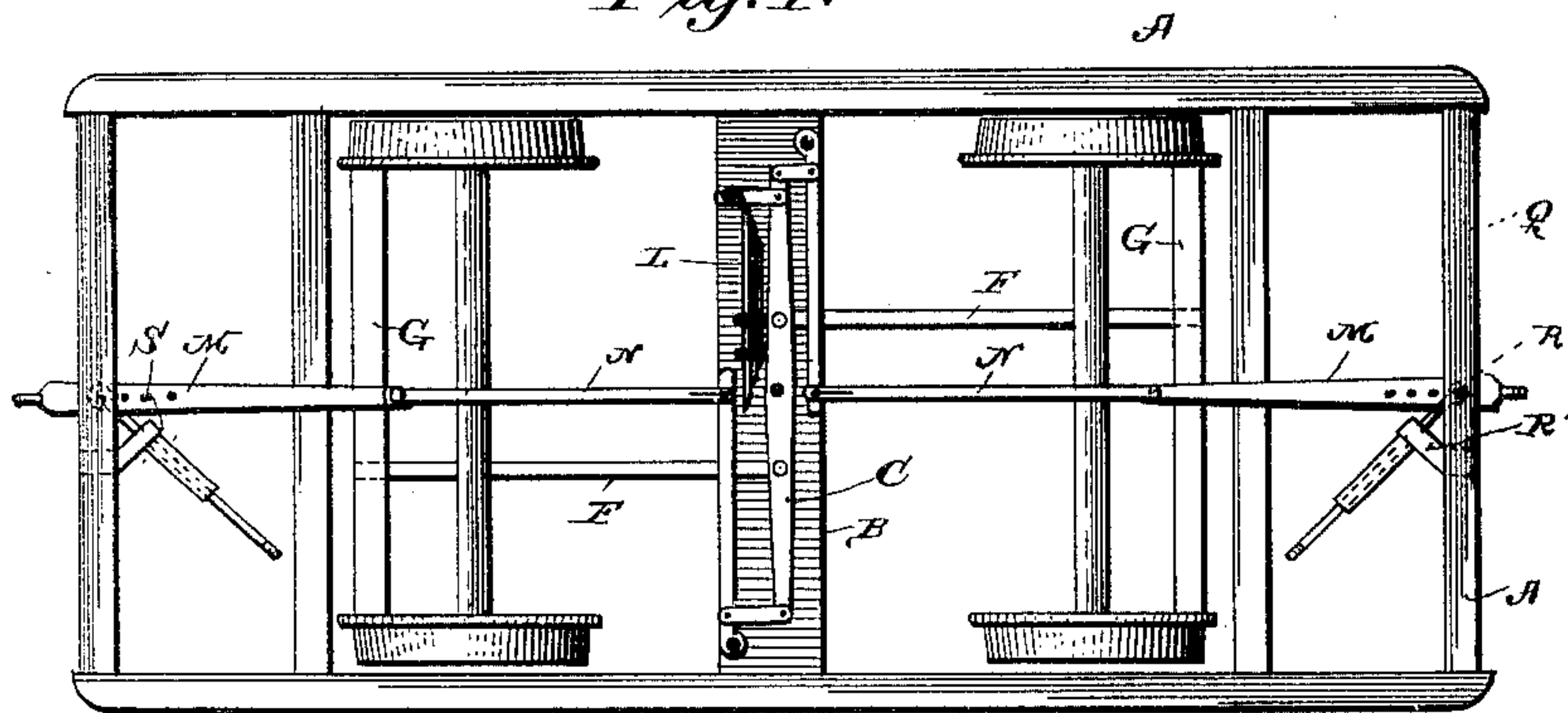


Fig. 5.

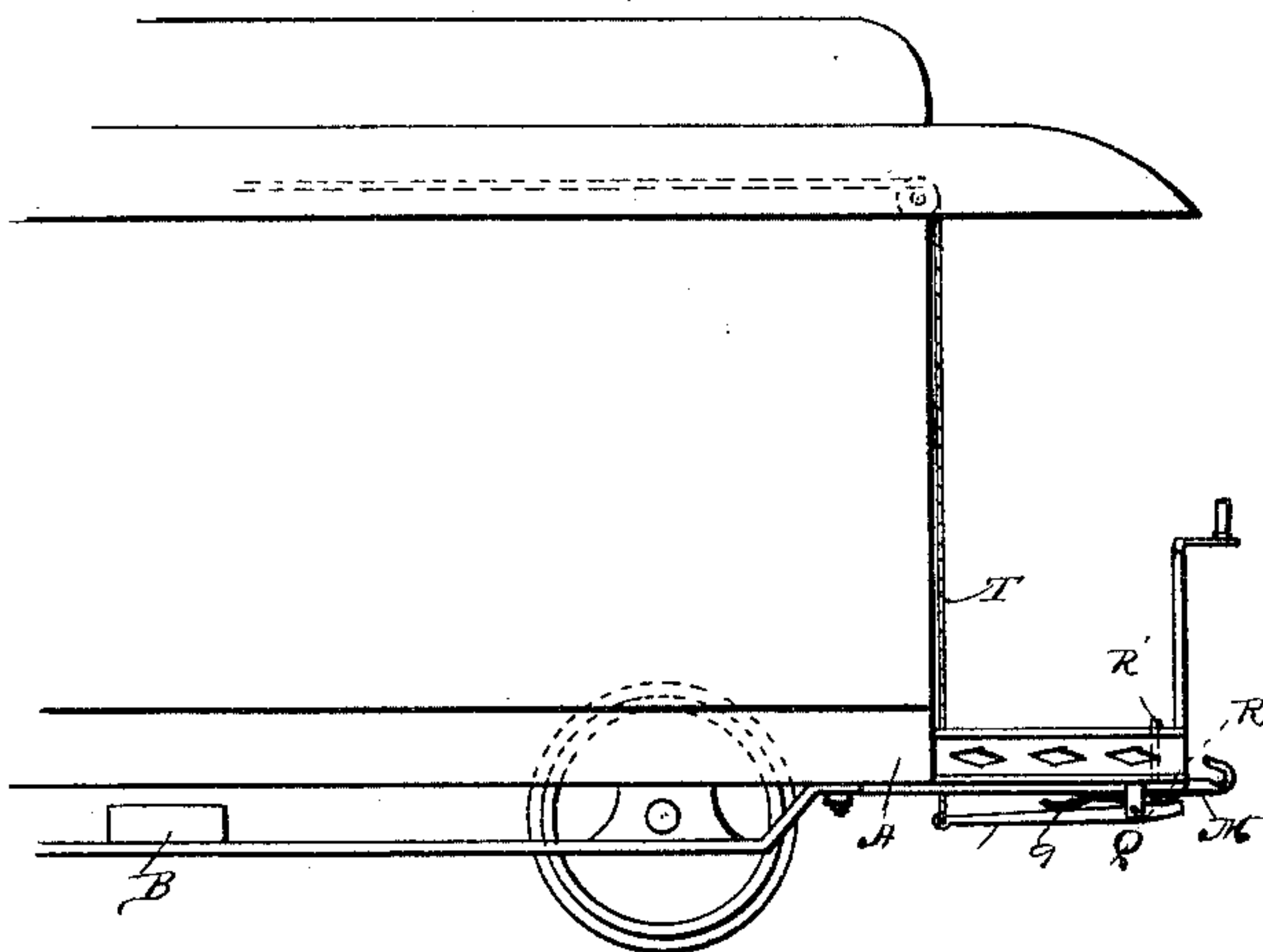
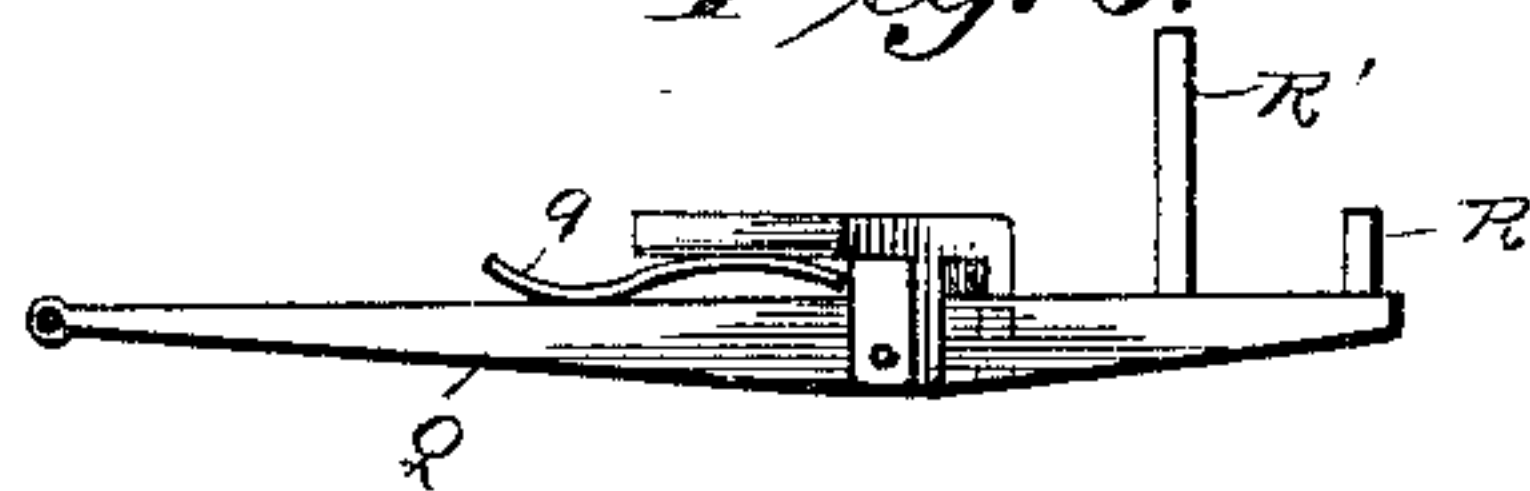


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY GALLAGER, OF SAVANNAH, GEORGIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 410,513, dated September 3, 1889.

Application filed July 10, 1889. Serial No. 317,012. (No model.)

To all whom it may concern:

Be it known that I, HENRY GALLAGER, a resident of Savannah, in the county of Chatham and State of Georgia, have invented certain new and useful Improvements in Car-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention is in brakes of the class in which the brake-shoe is normally pressed against the wheel by the action of a spring and withdrawn from the wheel by traction upon the draw-bar. It involves means for rendering the brake at will either wholly or partially inoperative and for placing it equally under the control of the conductor and of the engineer or driver.

In the accompanying drawings, Figure 1 shows in plan the brake applied at each end of an ordinary railway-car, only the floor-timbers of the latter being shown, and these, together with parts of the truck-frames, being broken away to disclose parts beneath. Fig. 2 is a side elevation of adjacent ends of two ordinary freight-cars provided with my devices. Fig. 3 is a detail view. Fig. 4 shows my devices applied to a street-car, the view corresponding to Fig. 1. Fig. 5 is a side elevation of the devices shown in Fig. 4. Fig. 6 shows the locking device as used upon a street-car.

In Figs. 1, 2, and 3, wherever the letters appear, A A are floor-timbers supported by trucks the frames of which bear a cross-bar B to support devices to be described, and which, being the same at each end of the car, need not be separately explained. A lever C is pivoted at D to the middle of the cross-bar B, and from points upon the opposite side of the pivot D, and equidistant therefrom, pivotally-attached rods F F run to the middle of swinging brake-beams G, that present no novelty in construction and attachment to the truck-frames. From the bottom of the car at its center a lever H is pivotally supported in a stirrup I, and in the same stirrup and a second one J is fixed a powerful leaf-spring K, whose free end is attached to the lever H

near its end by a link L. The ends of the lever H are connected, respectively, with the corresponding ends of the levers C, so that swinging of the former pushes the four brake-beams from the corresponding pairs of wheels. Such swinging is occasioned by traction upon sliding draw-bars M, and is resisted by the spring K, which always tends to keep the shoes in contact with the wheels. The draw-bars are connected with the parts to be thus operated by rods N, attached to the inner ends of levers O, whose outer ends are pivoted to supports upon the frame and which at an intermediate point are pivoted to the rods P, which join the corresponding ends of the levers H and C.

From the construction it is plain that tension upon the draw-bars or either of them will overcome the force of the spring K and that the brakes will be all forced from the wheels. It is further evident that were there no additional devices the spring would instantly apply the full force of the brake when traction ceased, and as traction is not always required in moving a train it becomes necessary to provide means for avoiding this undesirable application of the brake. This is done in using a spring-actuated centrally-pivoted lever Q, having at one end an upwardly-projecting pin R, adapted to enter either of a series of perforations S in the draw-bar, and thus lock the latter in position. This lever passes obliquely beyond the end of the car, and to its outer end is attached a chain or cord T, which passes upward and bears upon its upper end a pulley U to run upon a cord V, running from end to end of the train along the tops of the cars and bending downward between them to pass around the pulleys U which the cords T do not permit to rise to the level of the car-tops. A strong pull upon the cord V lifts the outer end of the lever Q, withdraws the pin R from the draw-bar, and releases the latter, when the spring K instantly applies the full force of the brakes. When traction is again required to draw the train, or when the engine is caused to advance more rapidly than the motion acquired by the cars at that instant, (as, for example, by putting on steam for an instant

while on downgrade,) the brakes are withdrawn from the wheels and locked automatically by the pin R, to be again released by either engineer or conductor by simply pulling the cord V, as before.

When the devices are to be employed upon passenger-coaches, the rope V may be the bell-rope, or an additional cord passing through the same guides.

Figs. 4, 5, and 6 show the slight modifications made in applying the brake to an ordinary street-car, like letters being used to indicate similar parts. The ends of the lever C are both extended beyond the rods connecting it with the brake-beams, and are connected indirectly through levers O with the respective draw-bars by the rods N; but the main features of the brake are the same as in the case of the railway-cars having four pairs of wheels, and, as in that case, a single spring only is required to operate all the brakes upon one car.

Having now fully described and explained the operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a car, a brake mounted thereon, a spring adapted to force the brake against the wheels, and a sliding draw-bar connected with the brake to overcome the force of the spring and carry the brake from the wheels, of draw-bar locking

mechanism, a cord passing from end to end of the car through the upper part thereof, and a lock-actuating rope connecting said locking mechanism with said cord, substantially as and for the purpose set forth.

2. The combination, with the car and truck frames and the swinging brakes G, of the transverse bar B, the lever pivoted thereon, a spring connected to said lever to draw the brakes against the wheels, and a sliding draw-bar connected with said lever to draw it in the opposite direction, substantially as set forth.

3. The combination, with the car, of the swinging brake suspended to swing against the car-wheels, the lever H, pivotally suspended between the brakes and having its ends connected with them, respectively, the spring K, fixed alongside the lever, the link L, connecting the free end of the spring to one end of said lever, and the sliding draw-bars connected, respectively, to the ends of the lever to overcome the force of the spring, substantially as and for the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HENRY GALLAGER.

Witnesses:

G. R. MILLEN,
GUGIE BOURGMAN.