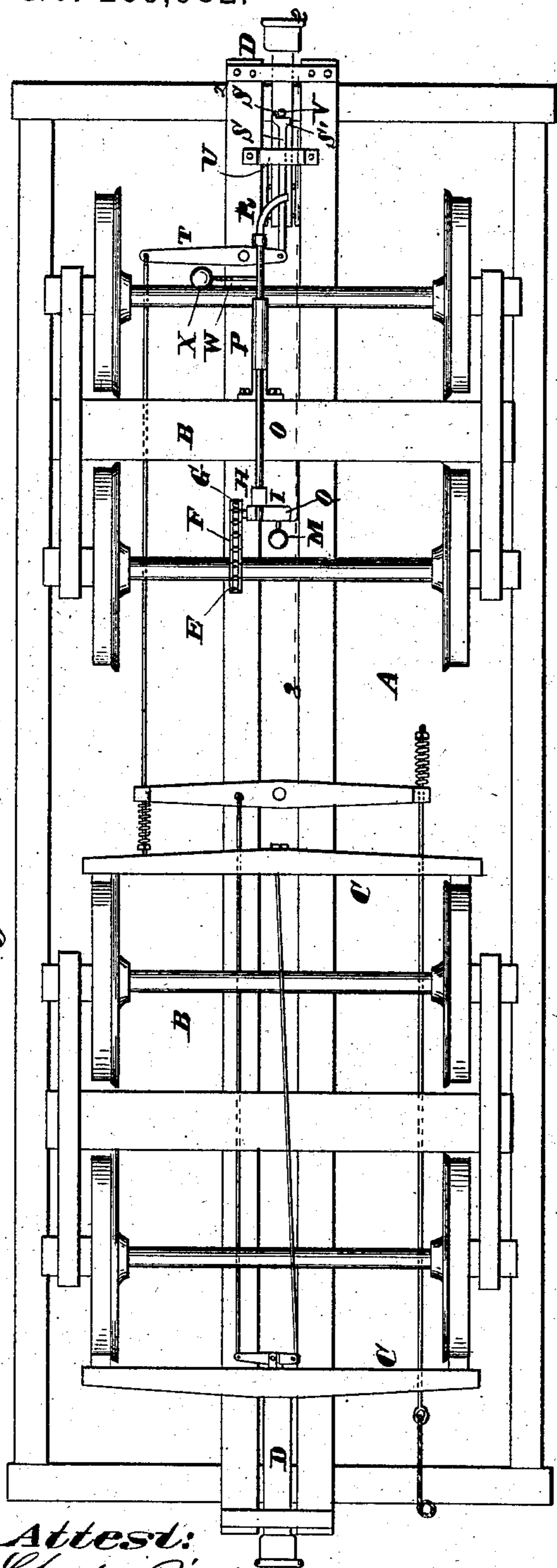


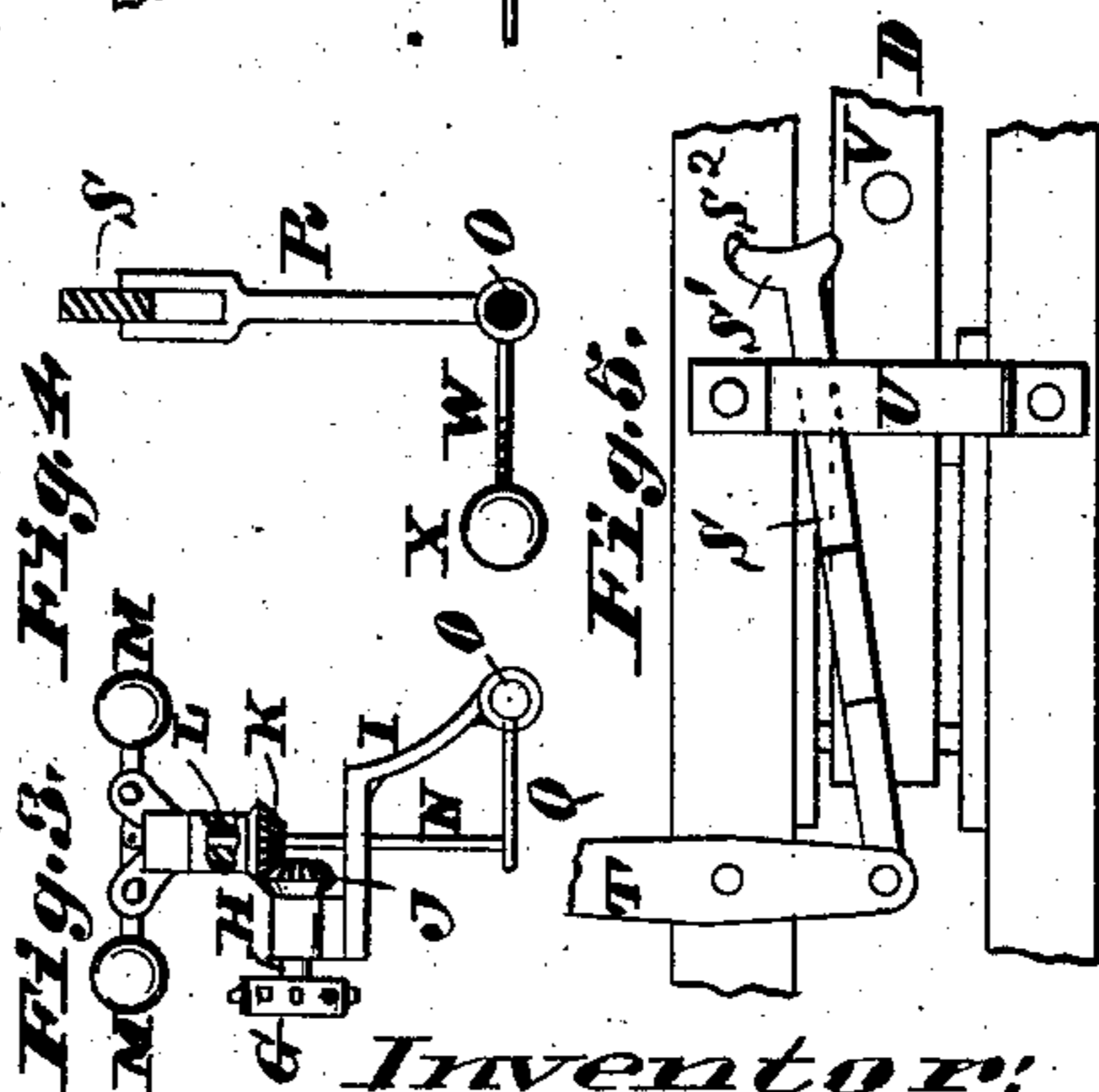
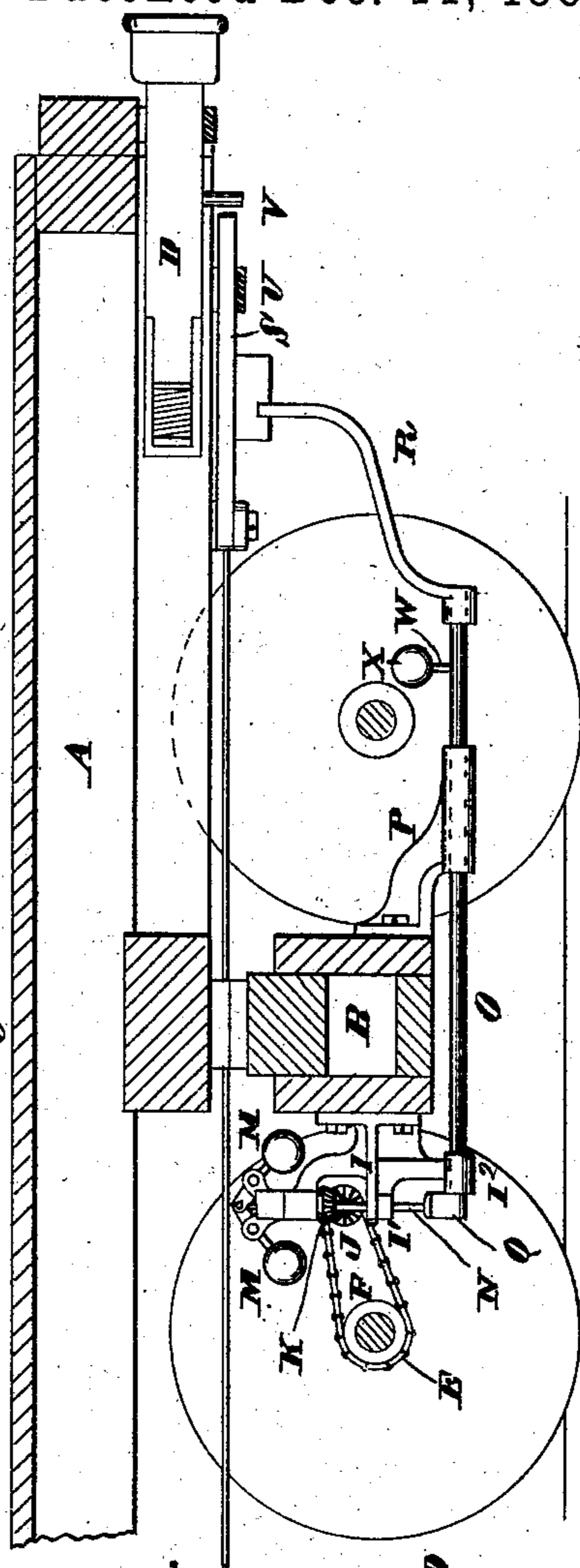
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CAR BRAKE.

Patented Dec. 11, 1883.



Fi g. 2.



Inventor;
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attys

UNITED STATES PATENT OFFICE.

WILLIAM CLAYTON, OF ST. LOUIS, MISSOURI.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 289,982, dated December 11, 1883.

Application filed August 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CLAYTON, of the city of St. Louis, in the State of Missouri, have invented a new and useful Improvement in Car-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a bottom view of a car with my improvement applied. Fig. 2 is a vertical longitudinal section, on a larger scale, of one end of a car, being taken on line 22, Fig. 1; and Figs. 3, 4, and 5 are detail enlarged views illustrating different parts.

My invention relates to an automatic car-brake; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents the bottom of a car, B the trucks, C the brake-beams, and D the draw-bars, all of which are of ordinary construction.

My invention may be applied to one or both ends of the car; but I have only shown and will only describe it applied to one end.

Secured to one of the axles of the truck, preferably the inner one, is a chain-wheel, E, which is connected by means of a chain-belt, F, with a similar wheel, G, on one end of a short shaft, H, journaled in a bracket, I, which secures it to the truck. On the other end of the shaft H is a miter-wheel, J, which meshes into a similar wheel, K, on the lower end of a governor-sleeve, L, journaled in the bracket I, and being secured by its arms to the stems of governor-balls M. The inner ends of the stems of the governor-balls are made fast to the upper end of a vertical rod, N, which passes down through the governor-stem, and a projection, I', of the bracket I. The projection acts as a guide and support to the lower part of the rod.

O represents a rock-shaft, one end of which is supported in an extension, I², of the bracket I, and the other by a bracket, P, secured to the other side of the truck. (See Figs. 1 and 2.) On the inner end of this rock-shaft is a short arm, Q, which bears against the lower end of the rod N, and the outer end has secured to it a lever, R, the other end of which is loosely connected to a push-bar, S, free at its outer end, but connected by its inner end to one end of a lever, T, pivoted to the bottom

of the car and connected by its other end, as shown in Fig. 1, or by similar contrivance to the brake-beams of the truck at the other end of the car from where it is attached; or it may be connected to the brake-beams of the truck to which it is attached. The free end of the push bar or arm is sustained by a strap, U, secured to the bottom of the car. The free end of the push-arm has a head, S', with a projection, S², on one side.

V represents a pin or teat extending down from the bottom of the draw-bar.

The rock-shaft is provided with a screw-threaded lever-arm, W, having a ball, X, or other weight on it.

The operation is as follows: When the car is standing still, the weight X on the rock-shaft pulls the lever R over, holding the forward end of the push-bar S away from the pin V on the draw-bar. When the car starts and has gained a certain speed, the governor-balls (being turned through the described connection with the axle) rise, lowering the rod or shaft N, which, bearing upon the arm Q, rocks the shaft O, raising the weight W, and causing the lever R to move the free end of the push-bar S over in front of the pin V, the movement in this direction being limited by the projection S². (See Fig. 1.) Now, suppose the locomotive to be reversed and pushed in the opposite direction from that in which the cars are moving. It is evident the brakes will be applied and with more or less force, according to the pressure of the locomotive, and as soon as the train has stopped and the draw-bar allowed to assume its natural position the weight W, through means of the lever R, will move the push-bar out of engagement with the pin V. The speed required to rock the shaft O depends upon the position of the weight W, which, as before stated, is adjustable upon its arm, and thus it can be regulated as desired.

I claim as my invention—

1. The combination of a rock-shaft mounted in bearings on the truck having an arm at one end and a lever at the other end, a vertical rod to depress the arm, a brake-lever having a push-bar hinged thereto vibrated in a horizontal plane by the rock-shaft lever to receive pressure from the draw-bar, and means to return the parts to normal position when the car is at rest, as set forth.

2. In a car-brake, the governor-balls having the ends of their stems connected to a rod which bears upon the arm of a rock-shaft, and also having secured to their stems a sleeve 5 which is connected by means of suitable gearing to one of the axles of the truck, by means of which the governor-balls are turned, in combination with a weight on one side of the rock-shaft and a lever on the shaft connected to a 10 push-arm secured by one end to a lever connected to the brake-beams, and its other end being free to be moved into engagement with a pin or teat on the draw-bar, substantially as and for the purpose set forth.

15 3. The combination, in a car-brake, of the chain-wheel E on one of the axles of the truck,

chain-belt F, bracket I I' I'', chain-wheel G, shaft H, miter-wheels J K, governor-sleeve L, balls M, rod N, to which the stems of the balls are connected, arm Q, rock-shaft O, bracket 20 P, weight W X, lever R, push-bar S S' S'', lever T, to which the push-bar is secured and which is connected to the brake-beams, and draw-bar D, having a pin or teat, V, extending downward therefrom, all substantially as 25 shown and described, for the purpose set forth.

WILLIAM CLAYTON.

In presence of—

GEO. H. KNIGHT,

EDW. E. ISRAEL.