No. 650,126. Patented May 22, 1900.

T. C. DU PONT.

CAR BRAKE.

(Application filed Aug. 17, 1899.)

(No Model.)

Fig. 1.

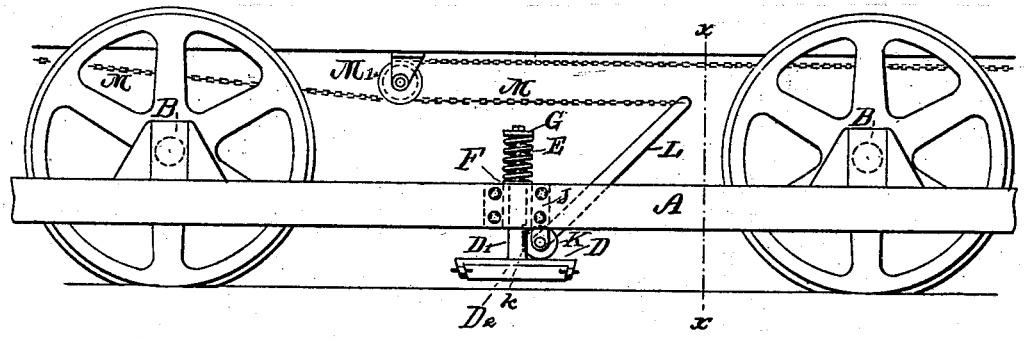


Fig. 2.

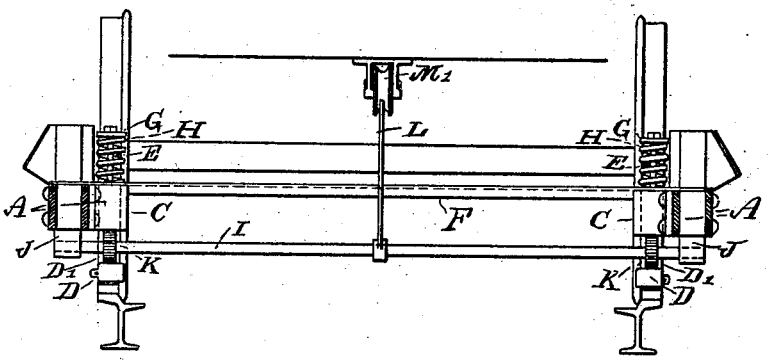
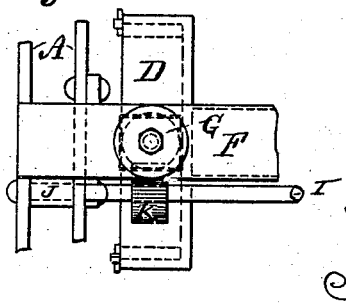


Fig. 3.



WITNESSES:

S. E. Clarkson

M. E. Sharpe.

INVENTOR

T. C. duPont

BY

Geo. H. Parmelee

his ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS C. DU PONT, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE LORAIN STEEL COMPANY, OF PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 650,126, dated May 22, 1900.

Application filed August 17, 1899. Serial No. 727,506. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. DU PONT, of Johnstown, in the county of Cambria and State of Pennsylvania, 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, which form a part of this specification.

This invention has relation to certain new and useful improvements in car-brakes, and more particularly to that class of such brakes wherein the brake-shoes act by engagement with the track-rails.

The object of this invention is to provide a brake of this class which is simple and durable in its construction and which can be readily applied to a car-truck frame and operated from either end of the car; and with this object in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, which illustrate my invention and its application, Figure 1 is a side view of a car-truck having my invention applied thereto. Fig. 2 is a transverse section on the line X X of Fig. 1, and Fig. 3 is a detail view.

The truck which I have shown in the drawings is of the well-known Du Pont type, having side frames composed of parallel bars or plates A and supported from and below the axle-boxes B. The invention is not, however, limited in its application to this style of truck.

C designates a flanged brake-head guide, which in the construction shown is securely bolted or riveted to the side frame A directly over one of the track-rails.

D is a recessed brake-head having a vertical arm D′, which is fitted to move in the said guide. Secured in the said arm is a vertical rod or plunger E, which extends up through a guide in a cross member F of the truck-frame. At its upper end is a spring-cap G, and seated around said rod or plunger between said cap and the cross members F is a coiled spring H, which acts to lift the brake-head out of contact with the track-rail.

D^2 is the brake-shoe, which may be of wood or any other suitable material and which is removably secured in said head D, so that it may be removed and replaced when worn out.

I is a rock-shaft journaled transversely of the truck-frame in bearing-pieces J, which are secured between the side-frame plates A and also serve as distance or separation pieces therefor. Secured on the said shaft is a pinion K, whose teeth engage rack-teeth *k*, formed on the arm D′ of the brake-head.

L is a lever-arm secured to the said shaft, and to which is attached suitable means for effecting the operation of the brakes from the car-platform. In the drawings I have shown such means as consisting of chains M, having suitable bearings M′ and running to the brake-staffs. Various means may, however, be employed for this purpose.

While I have in the above description referred specifically to a single brake, two will usually be employed, one at each side, as shown in Fig. 2, each being a duplicate of the other and operated simultaneously from the one rock-shaft.

The operation will be readily seen. The lever-arm L being actuated to rock the shaft I, the engagement of the pinions K with the rack-teeth *k* forces the brake-shoes down into braking contact with the rails and also effects compression of the springs H. These springs not only act to move the shoes up out of contact with the rails when released, but they render the braking contact a yielding one, and thereby prevent largely the shock which would otherwise arise from the sudden application of the brakes.

By slight mechanical modifications the brake above described may be adapted to various styles and constructions of trucks, and I do not wish to limit myself to the particular construction and arrangement of parts which I have herein shown and described.

Having thus described my invention, what I claim, and desire to protect by Letters Patent, is—

1. The combination with a truck-frame having spaced parallel side bars, guides secured thereto, and spacing-blocks interposed between the said bars and having projections extending below the same, of a brake-carrying arm fitted to move in the said guides, and

provided at one edge with rack-teeth, a rock-shaft journaled in the downward projections of said spacing-blocks, a pinion fixed to said shaft and engaging the said rack-teeth, and means for actuating the said rock-shaft, substantially as described.

2. The combination with a truck-frame having parallel side bars, spacing-blocks interposed between said bars and having projections extending below the same, and guides secured to the said frame, of a brake-carrying arm fitted to move in the said guides and provided at one edge with rack-teeth, a rock-shaft journaled in the downward projections of said spacing-block and carrying teeth which engage the said rack-teeth, means for actuating the said shaft, and a cushioning and release spring for the said arm, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

T. C. DU PONT.

Witnesses:
JOHN H. KENNEDY,
H. W. SMITH.