J. KUNTZE.

CAR-BRAKE.

No. 184,876. Patented Nov. 28, 1876.

Fig. 1.

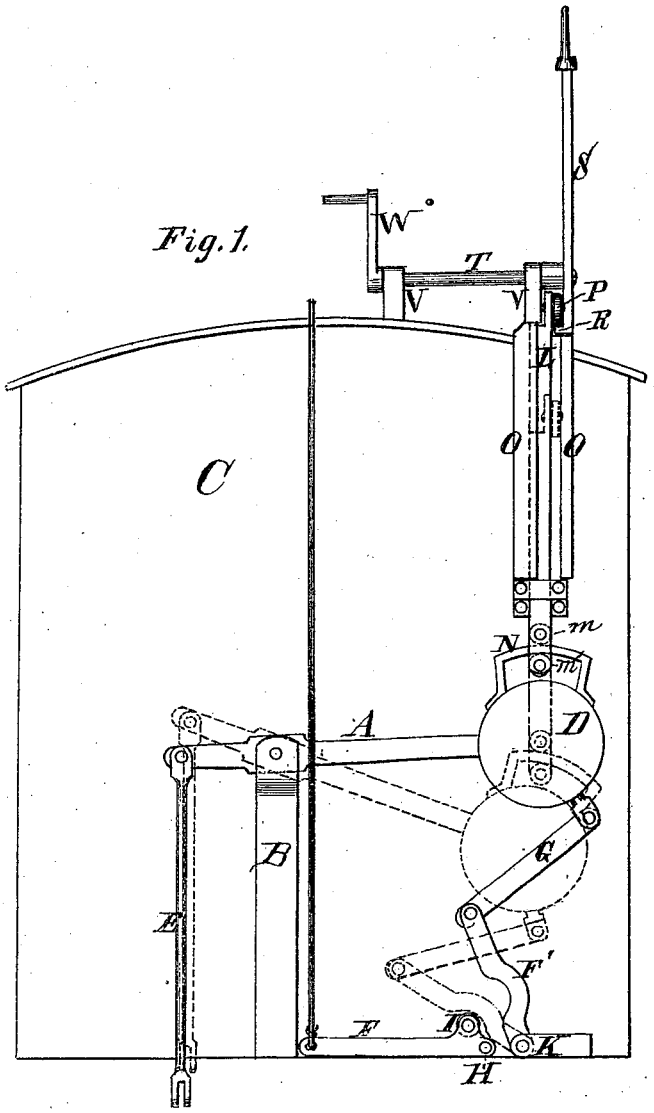
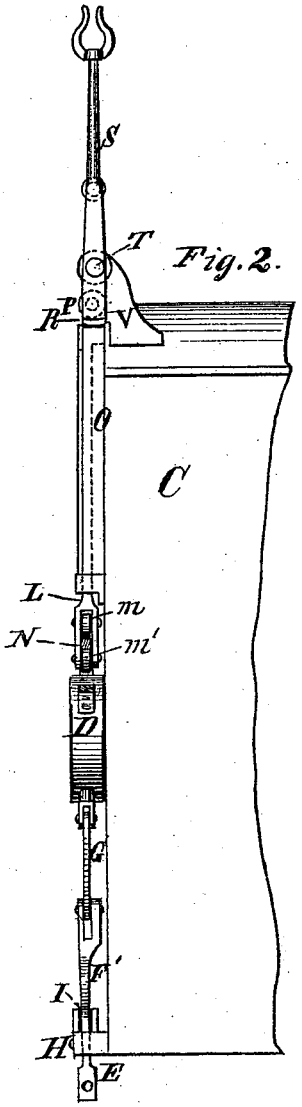


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JULIUS KUNTZE, OF HAMBURG, GERMANY.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **184,876**, dated November 28, 1876; application filed October 14, 1876.

To all whom it may concern:

Be it known that I, JULIUS KUNTZE, of Hamburg, in the Empire of Germany, have invented an Improvement in Brakes for Railway-Carriages; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

My invention has for its object the supplying of a brake for railway-cars, which, when released by a tripping device, shall automatically apply the brake-shoes to the wheels of such cars, and the tripping device of which may or may not be connected with the tripping devices of all other cars in the same train, so that they may be simultaneously operated, and thus make the braking of the cars continuous and simultaneous and automatic throughout the train.

The invention consists in a weighted lever attached to the car, which is connected with the brake-shoes by suitable mechanism, and also with mechanism which holds said weight, when lifted, until released by a tripping device, which is also a part of my invention, the falling of the weight, when released, applying the brake-shoes to the wheels. As aforesaid, the tripping devices on two or more cars may be connected to make the action of the brakes continuous throughout a train.

Figure 1 is an end view of a freight-car having my invention attached thereto. Fig. 2 is a side view of the same.

A is a lever, pivoted to a support, B, on the end of the car C. At the end of the longer arm of said lever is attached a weight, D, and to the end of the shorter arm of said lever is pivoted a connecting-rod, E, which connecting-rod transmits the power of the falling weight D through intermediate mechanism to the brake-shoes. The said weight is raised to the position shown in full outline, Fig. 1, by means of the levers F F′ and a link, G, the lever F being pivoted to the car at H, and having a friction-roller, I, which abuts against the inside of a hollow in the lever F′, this arrangement being adopted to avoid friction. The link G is pivoted to the long arm of the lever F′, and also to the weight D, and the lever F′ is pivoted to the car at K. To the end of the lever F is attached a rope or rod, by which the said lever is lifted by the operator from the top of the car, which lifting raises the weight, and, through the mechanism intermediate between the lever A and the brake-shoes, withdraws said brake-shoes from the wheels; but, instead of the lifting-levers F F′ and the link G, these parts may be dispensed with, and the weight D may be directly lifted from the top of the car by a rope attached to said weight. The weight, when lifted as described, is held in the elevated position by means of a suspending-rod, L, provided with friction-rollers *m m′* at its lower extremity, both of said rollers being pivoted in a slot formed in the lower end of said suspending-rod, through which slot, between the said friction-rollers *m* and *m′*, is passed the arc N, (shown in full side view in Fig. 1 and in section in Fig. 2,) said arc being rigidly attached to the weight D, as shown in Fig. 1. Said suspending-rod is regulated in its motion by vertical guides O, and has at the top a friction-roller, P, under which a shoulder, R, formed on the lower part of the lever S, passes when the apparatus is adjusted, to keep the weight D elevated. The lever S is attached to a rock-shaft, T, which has its bearings V V attached to the roof of the car, and which has a winch, W, at its end opposite the lever S.

The apparatus as thus described operates as follows: When the weight D is elevated into the position shown in full outline, Fig. 1, and the lever S is brought into a vertical position, the shoulder R is brought under the friction-roller P, attached to the suspending-rod L. In this position of the parts the brake-shoes do not act upon the car-wheels. When it is desired to apply the brake, the rock-shaft T is turned, either by the winch W or the lever S, enough to force out the shoulder R on said lever from under the friction-roller P. The weight D then falls, and, through the lever A, the connecting-rod E, and other mechanism below the car, forces the brake-shoes upon the wheels.

The friction-rollers may all be omitted, if desired, without affecting the nature of my invention, which will operate without them, although they render its action more easy and effective.

When it is desired to make the action of the brakes simultaneous and continuous throughout the train, the levers S on each car are joined by a cord or other similar connection, so that the tripping of the weight on any car will trip all the weights on the other cars. The upper ends of said levers are bifurcated, to facilitate the attachment of said connecting-cord.

I claim—

1. The combination, with the brake-shoes of a railway-car and a weighted lever connected with and operating to apply the brake-shoes, of the suspending-rod L, the tripping-lever S, and elevating apparatus for raising said weighted lever, substantially as and for the purpose specified.

2. The combination, with the weighted lever A, connected with and operating the brake-shoes, of the lifting-levers F F′, the link G, the suspending-rod L, the tripping-lever S, and the rock-shaft T, having the winch W, substantially as and for the purpose specified.

JULIUS KUNTZE.

Witnesses:
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