W. H. WILDER & C. W. CONANT.

Car-Brakes.

No. 206,286. Patented July 23, 1878.

Fig. 1

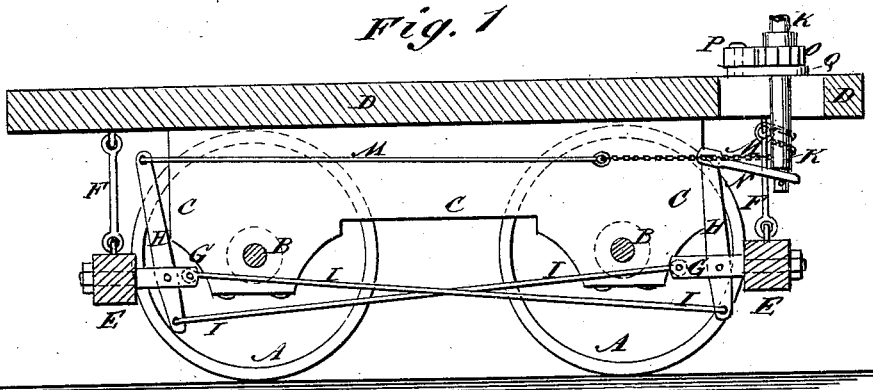


Fig. 2

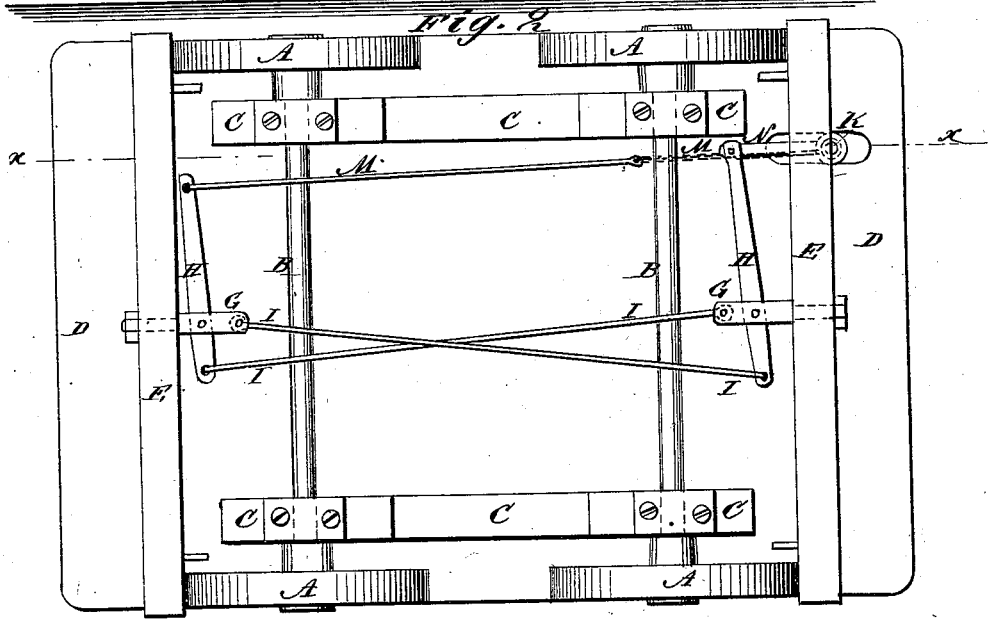


Fig. 3

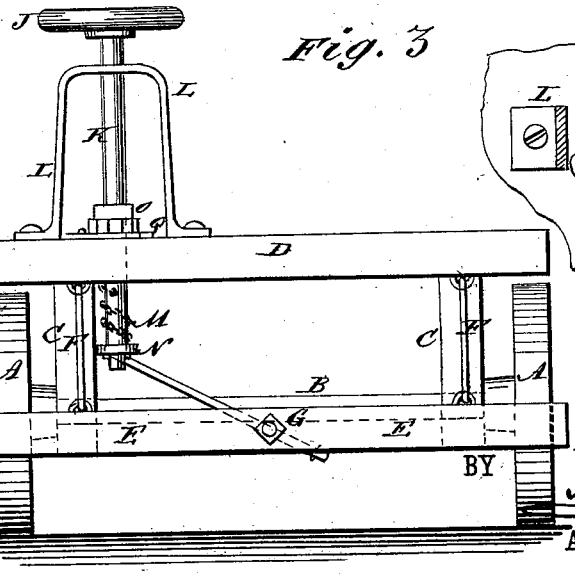
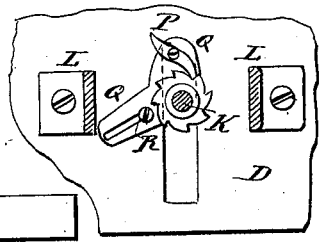


Fig. 4



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UNITED STATES PATENT OFFICE.

WILLIAM H. WILDER AND CHARLES W. CONANT, OF GARDNER, MASS.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **206,286**, dated July 23, 1878; application filed June 26, 1878.

To all whom it may concern:

Be it known that we, WILLIAM H. WILDER and CHARLES W. CONANT, of Gardner, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Car-Brakes, of which the following is a specification:

Figure 1 is a vertical longitudinal section of a car to which our improvement has been applied, taken through the line *x x*, Fig. 2. Fig. 2 is an under-side view of the same. Fig. 3 is an end view of the same. Fig. 4 is a detail top view of the ratchet-wheel, pawl, and slotted holding-plate, the brake-shaft being shown in cross-section.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved car-brake, which shall be so constructed as to enable the brake to be applied with much more force than brakes constructed in the ordinary way, and which shall be simple in construction and convenient in use.

The invention consists in the combination of the arm or bar, the second lever, and its rod with the brake-bars, the free lower end of the brake-shaft, the chain or chain and rod, and the first lever and its rod; and in the combination of the ratchet-wheel, the pawl, the plate provided with a slotted arm, and the bolt with the free lower end of the brake-shaft, as hereinafter fully described.

A represents the wheels, B the axles, C the truck-frames, and D the body, of a car. E are the brake-bars, which are hung from the car-body D by hinged or jointed rods F.

To the center of each of the brake-bars E is attached an inwardly-projecting stud or arm, G, in the slotted end of which is pivoted a lever, H.

To the end of the short arm of each of the levers H is pivoted the end of a connecting rod or chain, I, the other end of which is pivoted to the stud or arm G of the other lever H.

J is the hand-wheel, by means of which the brake is applied, and which is attached to the upper end of the brake-shaft K. The upper part of the brake-shaft K works in bearings in the support or frame L, attached to the platform of the car-body D. The lower part of the brake-shaft K passes through a longitudinal slot in the platform of the car-body D, and to it is attached the end of a chain, M. The other end of the chain M or a rod attached to it is attached to the end of the long arm of the farther or first lever H.

By this construction, as the shaft K is turned the chain M is wound around it, and the brake-bars E are down against the wheels A by the action of the farther lever H and the rod I.

The lower end of the brake-shaft K passes through a hole in the end of the rigid bar N, the other end of which is pivoted to the end of the long arm of the nearer or second lever H.

By this construction the inward draft of the chain M upon the brake-shaft K will also be applied, by means of the arm or bar N, the nearer lever H, and its rod I, to drawing the brake-bars E against the wheels, so that both the power and the resistance will be utilized for applying the brakes.

To the brake-shaft K, just above the platform of the car-body D, is attached a ratchet-wheel, O, with the teeth of which engages the pawl P. The pawl P is pivoted to the plate Q through a hole in which the brake-shaft K passes, and which rests upon the platform of the car-body D and can slide upon the said platform so as to keep the pawl P and ratchet-wheel O in proper relative position as the lower part of the brake-shaft K moves back and forth through its slot.

The plate Q is made with a projecting arm, which is slotted longitudinally to receive a bolt, R, for securing the said plate Q to the platform of the car.

By this construction the bolt R prevents the plate Q from turning, so that the ratchet-wheel O cannot carry the pawl P with it, but will be securely held from turning by the said pawl.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of the arm or bar N, the second lever H, and its rod I with the

brake-bars E, the free lower end of the brake-shaft K, the chain or chain and rod M, and the first lever H, and its rod I, substantially as herein shown and described.

2. The combination of the ratchet-wheel O, the pawl P, the plate Q, provided with a slotted arm, and the bolt R with the free lower end of the brake-shaft K, substantially as herein shown and described.

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