J. V. ERICSON.

Car Brake.

No. 201,917. Patented April 2, 1878.

Fig: 1

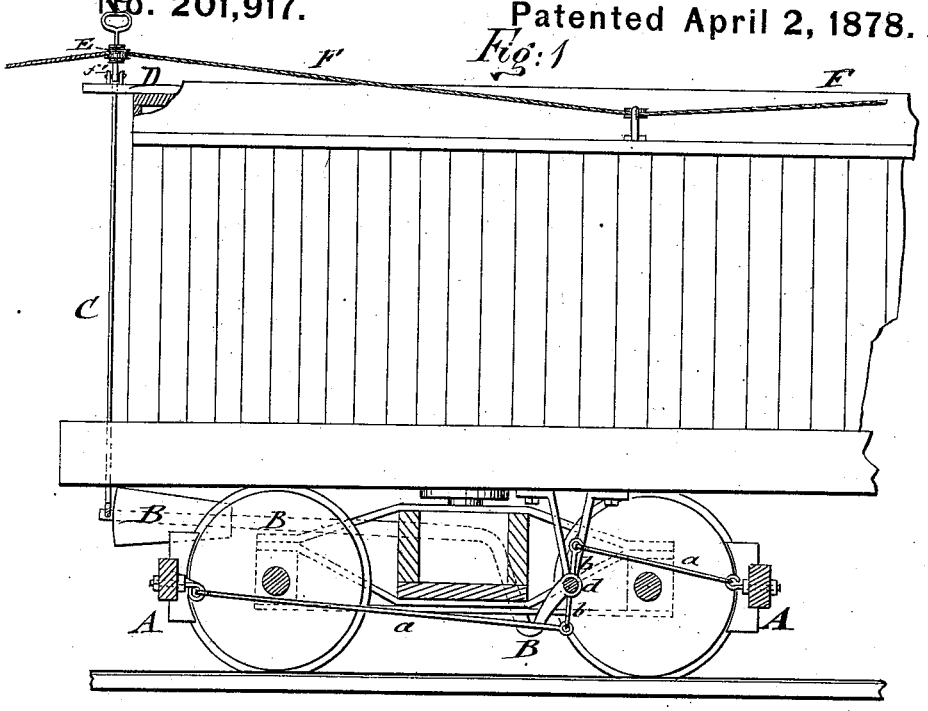


Fig: 3.

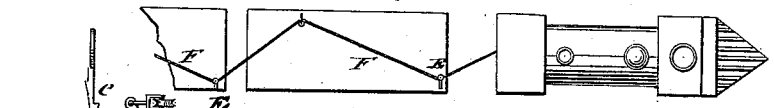
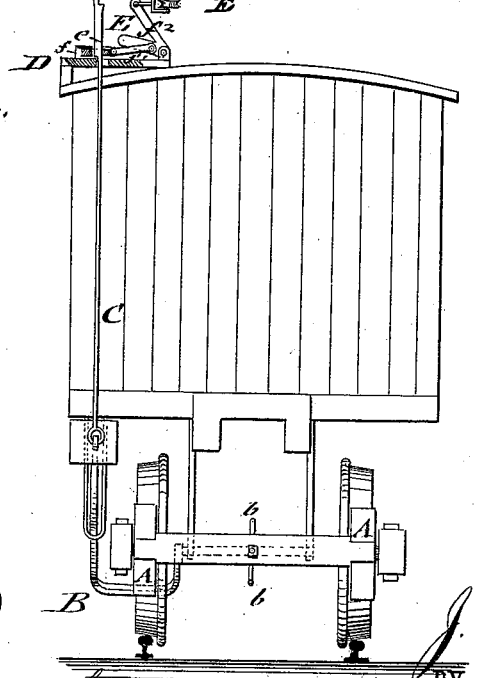


Fig: 2.



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JOHN V. ERICSON, OF ESCANAWBA, MICHIGAN.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **201,917**, dated April 2, 1878; application filed September 29, 1877.

To all whom it may concern:

Be it known that I, JOHN V. ERICSON, of Escanawba, in the county of Delta and State of Michigan, have invented a new and Improved Car-Brake, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a sectional side elevation of a car with my improved car-brake; Fig. 2, an end view of the same; and Fig. 3 is a diagram, showing the connection of the brakes of the different cars with each other and with the locomotive.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved car-brake that may be operated from the engine, caboose, or any other part of the train, being less expensive, and requiring no more dead-weight of iron than the air-brakes, and being more especially adapted for freight-trains, as they are not liable to get out of order, and as they facilitate the leaving or taking of cars at way-stations.

The invention consists in a novel mechanism for operating the ordinary brake-bars, consisting of a transverse rock-shaft arranged between the axles of the car, rods forming the connection of the brake-bars with said rock-shaft, a bent and weighted lever connected with the rock-shaft and extending to the end of the car, at the side thereof, and a vertical rod held in a locked position by devices at the top of the car, as will be hereinafter more fully described.

In the drawings, A represents the customary brake, which is applied by rod-connections *a* with rigid lever-arms *b* of a lateral shaft, *d*, at whose outer end a weighted lever, B, is rigidly attached. The lever B is bent or curved in such a manner as to run in a longitudinal direction outside of the truck of the car, thus locating the lever at the side of the car, out of the way of the coupling devices, and rendering the brake particularly adapted for freight-cars.

The weighted lever B is guided in suitable manner in a slotted arm of the car, and connected at the outer end by means of a pivoted shackle with the threaded end of a vertical rod, C, that is formed in the shape of a handle at the upper end, and guided in a slotted supporting-plate, D, secured to the top of the car.

The upright rod C has projecting shoulders or notches *e*, that bind either on the upper or lower side of the guide-plate D, according as the rod is raised or lowered.

The brakes are taken off the wheels and retained in this position by locking the weighted levers and upright rods in raised position by a locking device, E, which consists of a perforated slide-piece, *f*, guided along flanges of the guide-plate D, and embracing the rod C; next, of a connecting pivot-link, f^1, and of a fulcrumed V-shaped lever, f^2, to one arm of which, near the fulcrum, the link is pivoted.

By throwing the V-lever f^2 to one side, the upright rod is brought by the lever in line with the slot of the guide-plate, and, by the release of its shoulder from the guide-plate, dropped, so that the weight of the connecting-lever applies instantly the brakes.

For taking off the brakes and setting them in position clear of the wheels, the V-lever is brought back into vertical position, and the upright rod lifted, and, finally, the V-lever pressed over toward the rod, so as to lock the same in raised position on the guide-plate, as shown in Fig. 2.

The shoulder, nearer to the handle, locks against the under side of the guide-plate D, and secures the continuous application of the brakes to the wheels. The V-shaped levers may be connected by cords F, that are coupled together and passed through pulley-blocks in zigzag lines from the lock at one end of the car to a pulley near the diagonally-opposite end of the car, and then over to the pulley-block of the next lock, and so on, as shown in Fig. 3, so that in case of danger, by the detaching of the cars or otherwise, all the brakes may be applied, either from the locomotive or caboose, or any other part of the train, by pulling the brake-cord. The brake-connecting cords have only to be coupled in the manner of bell-cords in making up a train. After the brakes have been put on, they have to be taken off again for each car separately, by resetting again the vertical actuating-rods by the locking device of each car.

I am aware that it is not broadly new to connect the brakes of a car with a weighted

lever which, when unlocked or released, will serve to apply the brakes.

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

1. The transverse shaft *d*, having lever-arms *b*, and carrying at its outer end a curved and weighted longitudinal lever, B, and the vertical locking and releasing rod C, and a suitable retaining device for the latter, in combination with the car-truck, brake-beams A, and connecting-rods *a*, all constructed and relatively arranged as herein set forth.

2. The combination of the upright handle-rod C, having projecting shoulders or notches, the slotted guide-plate D, and the guided and lever-operated slide-piece of the locking device, for retaining the upright rod in raised or lowered position, substantially as specified.

JOHN V. ERICSON.

Witnesses:
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