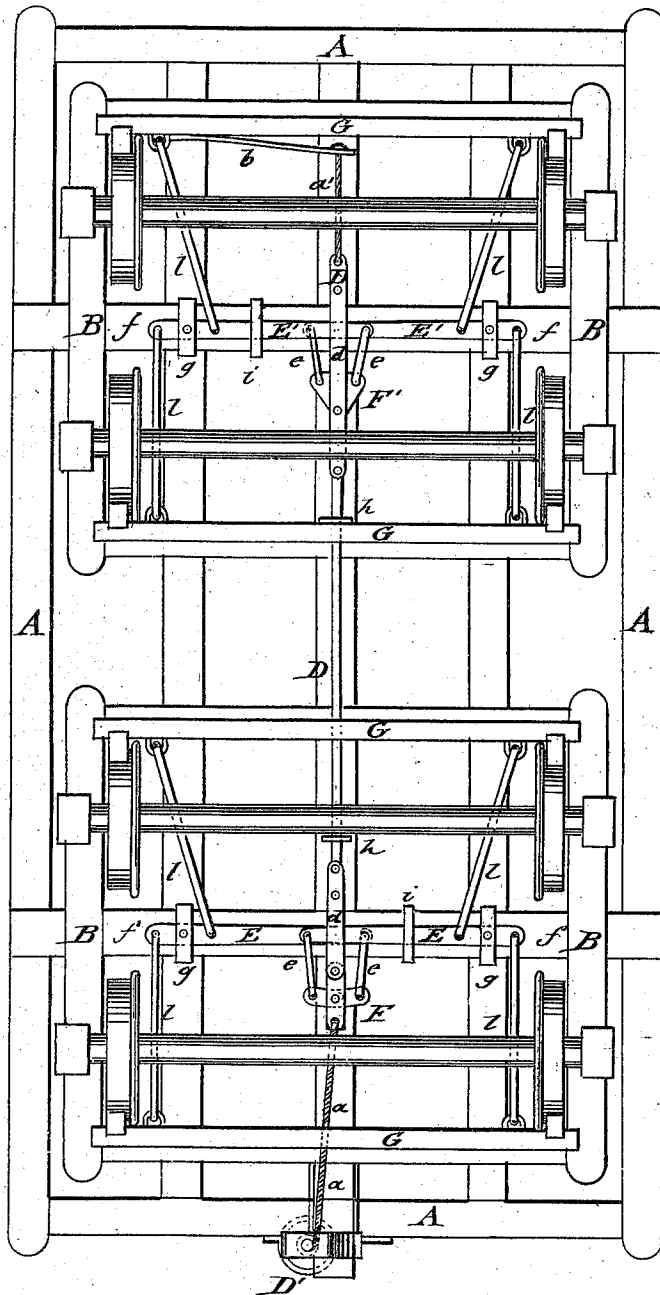


W. WARINNER.
Car-Brakes.

No. 142,658.

Patented September 9, 1873.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM WARINNER, OF CREELSBOROUGH, KENTUCKY.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **142,658**, dated September 9, 1873; application filed June 14, 1873.

To all whom it may concern:

Be it known that I, WILLIAM WARINNER, of Creelsborough, in the county of Russell and State of Kentucky, have invented a new and useful Improvement in Brake, of which the following is a specification:

The accompanying drawing represents a bottom view of my improved brake for railroad-cars.

My invention is an improvement in car-brakes; and consists in the arrangement of parts, as hereinafter described, and specifically indicated in the claim.

In the drawing, A represents the bottom of a railroad-car; B, the frame of the supporting-trucks. D' is the hand-wheel with ratchet arrangement of the car-platform, around whose shaft the chain or wire rope *a* is wound on using the brake. This chain is attached to the front end of a main bar, D, the rear end being connected by chain *a'* to a strong spring, *b*, of the truck-frame B, to assist and accelerate the release of the brakes after use. To both ends of main connecting-bar D are welded two pieces, *d*, of iron, forming a three-pronged fork or double clevis, between which the ends of levers E are moving. A tongue, F, in the shape of a cross, forms the extreme end of main bar D, being pivoted to the pronged front end of bar D, and connecting, by its cross-piece, with links *e*, pivoted to the inner ends of levers E. These levers E are placed under the main cross-pieces *f* of truck-frames B, with their fulcrums in staples *g* of pieces *f*, the lever-rods *l* being pivoted equidistant from

the fulcrums of levers E, and connecting with the brake-beams G, hung at suitable distance from each pair of car-wheels from the truck-frames B. Staples *h* guide main rod D in the longitudinal direction of the car, and the staples *i* of the main cross-pieces *f* the forward and backward motion of levers E. Tongue F of the rear levers E is of triangular shape, pivoted to the pronged part of main bar D.

On putting on the brakes, the hand-wheel is turned, which causes a forward motion of cross-tongue F and bar D, which is communicated by links *e* to the levers E and E'. They again, by means of lever-rods *l*, force the brake-beams G on the wheels, so that the powerful friction exerted thereon will soon stop the car.

The whole arrangement is strong, and not liable to get out of order, being applied to the truck-frames in such manner as not to interfere with the other parts of the car.

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

The brake mechanism, formed by the combination, with the transverse brake-bars G, connecting-rods *l*, and pivoted levers E, of pivoted cross-tongues F F', links *e e*, and main bar D provided with pronged ends *d d*, and the spring *b*, and cord *a'*, all arranged as shown and described, to operate as specified.

WILLIAM WARINNER.

Witnesses:

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