

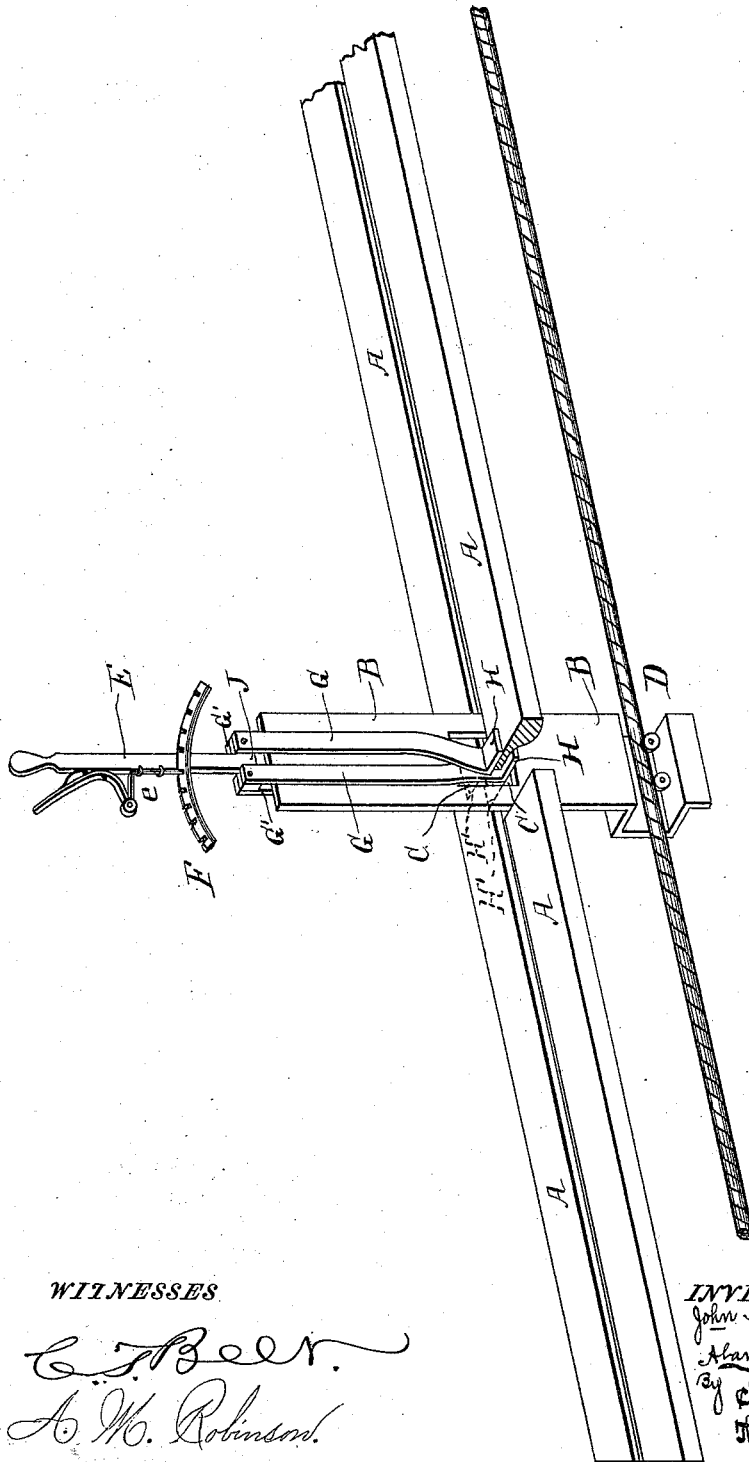
(No Model.)

J. M. BRADBURY & A. B. GRISWOLD.

CABLE CAR BRAKE.

No. 417,701.

Patented Dec. 24, 1889.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN M. BRADBURY AND ALANSON B. GRISWOLD, OF BUNKER HILL, KANSAS.

## CABLE-CAR BRAKE.

**SPECIFICATION** forming part of Letters Patent No. 417,701, dated December 24, 1889.

Application filed April 16, 1889. Serial No. 307,397. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN M. BRADBURY and ALANSON B. GRISWOLD, citizens of the United States, residing at Bunker Hill, in the county of Russell and State of Kansas, have invented certain new and useful Improvements on Cable-Car Brakes, of which the following is so full, clear, and exact a description as will enable others skilled in the art to which our invention appertains to make and use the same, reference being had to the accompanying drawing, in which the figure is a view of our device in perspective.

The object of our invention is to provide a brake for cable cars, which by reason of its contact with the rails forming the slot-borders in the roadway will serve as an easy and practical means of stopping a car in the shortest possible time and with the least liability of injury to car, brake, or track.

In the majority of brakes the car is subjected to severe strain and permanent injury when the brakes are applied, and in icy weather the cars slip and slide and frequently get beyond all control. By the use of a brake like the one illustrated in the accompanying drawing a positive hold on the edges of the rails or flanges of the slot is obtained, and the under sides of these edges are sure to offer a firm friction-surface, which is not liable to be smeared with ice, &c., and one to which the brake-grip will cling with bull-dog tenacity and positively and effectually stop the car.

In the accompanying drawing, A A designate the rails, which form the border to the slot in a cable roadway and track. Extending down between these rails A A is a grip-plate B, which is provided at its upper central portion with a perforation C, and which may or may not have the usual cable-grip apparatus at D. At or near the upper end of this grip-plate is a hand-lever E, which is provided with a latch e, which interlocks with a notched sector F, the purpose of which is to hold the hand-lever E in any desired position. The lower end of this hand-lever E is provided with an inverted-T-shaped fulcrum-head J, to which are pivotally connected the impinging levers G G. At the lower ends of these impinging levers are provided jaws H'

and H. These jaws H' H' are below the surface and are adapted to be brought into frictional contact with the under sides of the rails A A, while the oppositely-disposed jaws H H bear against the tops of the rails A A.

Through the perforation C in the grip-plate B the impinging levers G G are connected together, and in this way the pairs of levers G G and G' G', and through them the jaws H' H' and H H, are operated simultaneously by the hand-lever E and fulcrum-head J.

It will be readily understood that the presence or absence of the cable-grip mechanism at the lower end of the grip-plate B will not materially affect the operation of the brake-grip apparatus, and we wish to be distinctly understood as not limiting ourselves to its use in connection with our present car-brake. It will also be apparent that many of the well-known mechanical equivalents may be substituted for our special means of operating the impinging jaws and the intermediate mechanism, and we desire to secure protection on all substantial mechanical equivalents as well as the special devices shown and described.

By the employment of a brake of the character shown and described a firm hold may be obtained on the borders of the slot in the roadway, and by reason of the gripping of these borders or flanges from opposite sides there will be no tendency to derail the car. On the contrary, the car will not only be held more firmly to its place on the track, but all tendency of the car to rise or jump by reason of its velocity and weight and the presence of friction at its points of contact with the tracks will be entirely overcome or withstood and resisted until the momentum of the car is distributed and communicated to the rails and road-bed.

Having described and shown a preferred means of carrying our invention into practice, what we desire to secure by Letters Patent, and what we therefore claim, is—

1. In a car-brake of the character described, a pair of jaws and their impinging levers, in combination with a hand-lever provided with an inverted-T-shaped fulcrum-head, substantially as described.

2. A car-brake of the character described,  
consisting of a perforated grip-plate and an  
operating-handle, in combination with oppo-  
sately-disposed impinging levers provided  
5 with oppositely-disposed jaws, all connected  
together and operating in conjunction with  
each other, substantially as and for the pur-  
poses specified.

In testimony whereof we affix our signatures  
in the presence of two witnesses.

JOHN M. BRADBURY.  
ALANSON B. GRISWOLD.

Witnesses:

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