

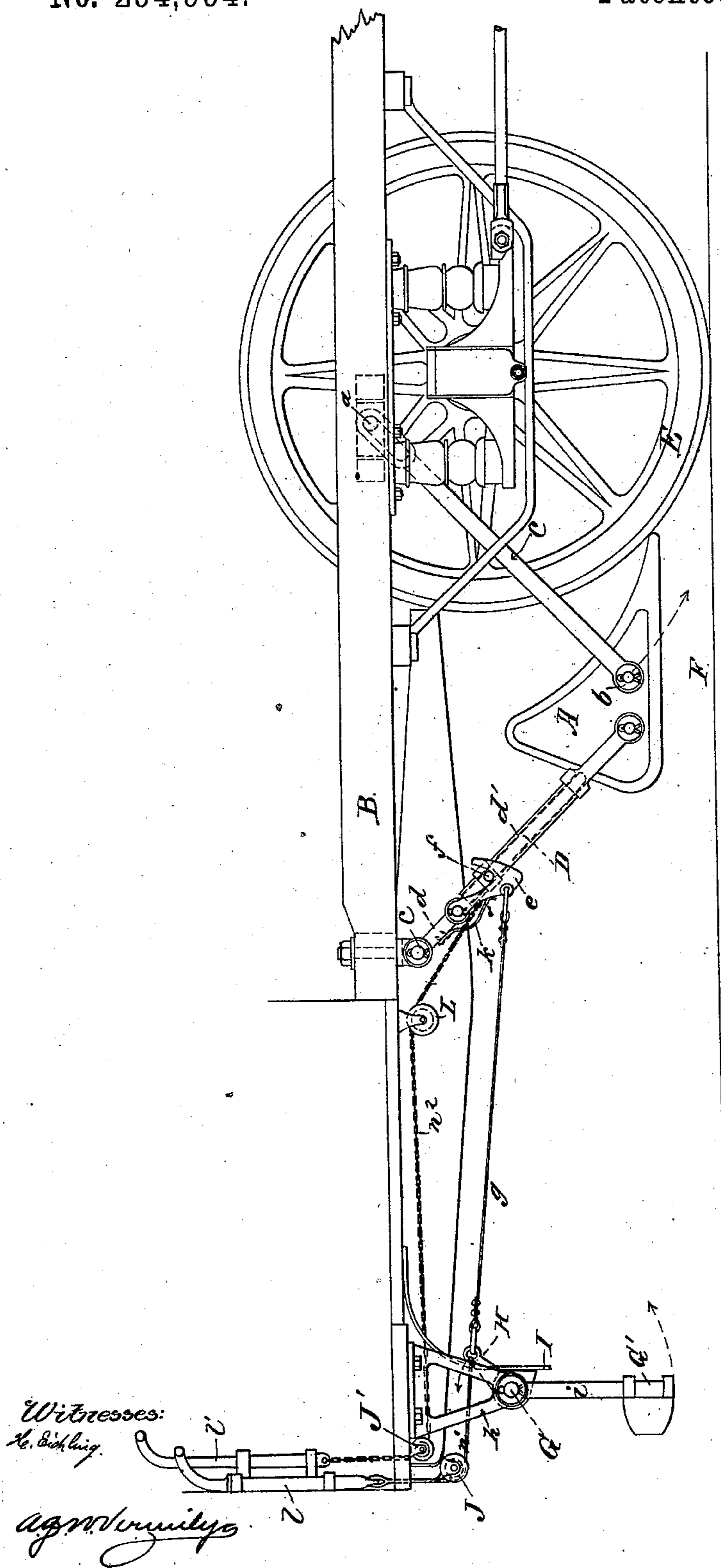
(No Model.)

W. HACKLÄNDER.

CAR BRAKE.

No. 294,994.

Patented Mar. 11, 1884.



UNITED STATES PATENT OFFICE.

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CAR-BRAKE.

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To all-whom it may concern:

Be it known that I, WILLIAM HACKLÄNDER, a resident of the city of Ehrenfeld, in the Province of the Rhine and Empire of Germany, have invented a new and useful Railroad-Car Brake-Shoe, of which the following is a specification, reference being had to the accompanying drawing, forming part of the same, the said drawing (a single figure) being a side elevation of the forward end of a car, to which is attached my shoe-brake and its connections.

My invention relates to a brake-shoe for railroad-cars; and it consists of a shoe suspended in front of the wheel of a car, with means for automatically dropping the shoe upon the rail under the wheel, so as to arrest the movement of the car, such means being brought into action by any obstruction on the track which may be encountered by the car.

A is the brake-shoe, which may be of iron or wood. It is formed, preferably, as shown in the drawing, curved on the face next the wheel to fit the curvature of the latter, the lower edge being straight to lie on the rail. This brake-shoe is suspended from the car-body B by two swinging arms, C and D, the arm C being pivoted at its upper end to the bottom of the car-body, as at *a*, and at the lower end to the said shoe, as at *b*, so that when said arm swings downward on its upper pivot the shoe will drop down upon the rail immediately in front of and in contact with the wheel E, said arm being slotted at its upper end, so as to have a longitudinal movement on its pivot. There may be two arms, one on each side of the shoe, each having a separate and independent pivotal connection at its upper end to the car-body. The arm D is in two parts, *d* *d'*, the one being made to slide longitudinally on or in the other. One may be a tube and the other a rod fitted to slide in it. The part *d* is hinged or pivoted to the car-body, as at *c*, so that when the part *d'* is left free to slide in part *d* the shoe will drop down upon the rail F. Under the wheel *e* is a hook, pivoted on the part *d* above the upper end of the part *d'*, and *f* is a stud fixed in the part *d'*, so that said hook may engage with the stud and hold the part *d'* from sliding down.

Under the platform is arranged transversely thereto a shaft, G, journaled in suitable brackets, *h*, attached to the under side of the plat-

form, and from which is suspended by suitable rods, *i*, a bar or frame, G', which extends across the car and down to near the rails of the road, in front of the wheels. On this shaft G is also fixed an arm, H, extending upward, and the outer end of which is connected by a rod or chain, *g*, to the hook *e*, the arrangement being such that when the frame G' encounters an obstruction on the track said frame is swung back under the car, thereby rocking the arm H forward. The hook *e* is thereby detached from its engagement with the part *d'* of arm D, and the shoe is thus allowed to drop down upon the track under the car-wheel.

In order that a small obstruction may be removed from the track or forced along in front of the car without causing the shoe to fall down under the wheel, a spring may be employed to maintain the frame in its directly downward pendent position, which will oppose the requisite resistance to the inward movement of the frame. I represents such a spring, one end of which is attached to the platform and the other presses against the arm D.

In order to provide means whereby the brakeman on the car may at pleasure drop the shoe upon the rail, I attach a chain or cord, *n'*, to the end of the arm H, carry it under a loose pulley, J, and up through the platform of the car, within reach of the brakeman. Preferably it is connected on the platform to a lever or bar, *l*, suitably supported or arranged on the platform, whereby the brakeman can conveniently draw up the chain or cord to detach the hook *e*. If preferred, the chain or cord may be attached directly to said hook.

Means are provided whereby the brakeman on the platform may restore the shoe to its suspended position after being let down upon the rail. To this end I attach a chain or cord, *n''*, to the upper end of the part *d'* of the arm D, carry this over a loose pulley, L, thence under a second pulley, J', under the platform, and up through the same to connection with a second brake lever or bar, *l'*, on the platform. The hook *e* may be made to automatically engage the stud *f* by having the outer lower edge of said hook beveled, so that the stud *f*, as the part *d'* is drawn upward, will push the hook back and allow the stud to pass it. Then a spring may be arranged to throw the hook into re-engagement with the stud. The spring *k*,

the upper end of which is made fast to the part *d*, with the lower end resting against the hook, will serve the purpose.

I do not limit myself to the precise form of the devices described for detachably connecting the part *d* to the part *d'* of the arm D. Any equivalent devices may be employed whereby the part *d'* may be released, so as to slide downward by the swinging of the frame *G'* inward under the car.

A shoe with similar attachments may of course be provided for each side of the car, and then, if preferred, a single chain or cord, *n'*, with two branches connected severally to the two latching-hooks *e*, may be provided and employed. So, also, a single chain or cord, *n''*, with two branches connected severally to the two lower parts, *d'*, of the arm D, (one on each side of the car,) may be employed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a railroad-car, of a brake-shoe suspended, as described, by arms

bar, or frame, *G'*, under the end of the car, connected, as described, to a swinging brake, 25 on arm D, whereby the swinging of said bar or frame back and under the car will automatically detach said latching device and permit the said brake-shoe to drop downward upon the railroad-track in front of and under the car-wheel, all as specified. 30

2. The combination, with a railroad-car, of the shoe A, arms C and D, the latter formed of two parts, *d d'*, provided with the described 35 latching device, the chain or cord connected to said latching device and passing around a loose pulley, J, under the platform of the car, upward above the same, all as and for the purpose described.

W. HACKLÄNDER.

Witnesses:

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